

## **MOUNTAIN VIEW GREEN BUILDING CODE – MATRIX ADOPTION TABLE**

### **CHAPTER 1 – ADMINISTRATION**

Adopting agency	BSC	SFM	HCD			DSA		OSHPO				CSA	DPH	AGR	DWR	CEC	CA	SL	SLC
			1	2	1-AC	AC	SS	1	2	3	4								
Adopt entire CA chapter																			
Adopt entire chapter as amended (amended sections listed below)																			
Adopt only those sections that are listed below	X		X				X	X	X		X								
Chapter/Section																			
101	X		X				X	X	X		X								
102	X		X				X	X	X		X								
103	X																		
104			X																
105							X												
106								X	X		X								

## **CHAPTER 1**

### **ADMINISTRATION**

#### **SECTION 101**

#### **GENERAL**

**101.1 Title.** These regulations shall be known as the Mountain View Green Building Code and may be cited as such and will be referred to herein as “this code.” The Mountain View Green Building Code is an amendment to Part 11 of twelve parts of the official compilation and publication of the adoption, amendment and repeal of building regulations to the *California Code of Regulations*, Title 24, also referred to as the *California Building Standards Code*.

**101.2 Purpose.** The purpose of this code is to improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories:

1. Planning and design
2. Energy efficiency
3. Water efficiency and conservation
4. Material conservation and resource efficiency
5. Environmental quality

**101.3 Scope.** The provisions of this code shall apply to the planning, design, operation, construction, use and occupancy of every privately-owned, newly constructed building addition or tenant improvement as regulated in this code throughout the City of Mountain View.

It is not the intent that this code substitute or be identified as meeting the certification requirements of any private, third-party green building program.

**101.3.1 State-regulated buildings, structures and applications.** Provisions of this code shall apply to the following buildings, structures and applications regulated by state agencies as referenced in the Matrix Adoption Tables and as specified in Sections 103 through 106, except where modified by local ordinance pursuant to Section 101.7. When adopted by a state agency, the provisions of this code shall be enforced by the appropriate enforcing agency, but only to the extent of authority granted to such agency by statute.

1. State-owned buildings, including buildings constructed by the Trustees of the California State University, and to the extent permitted by California law, buildings designed and constructed by the Regents of the University of California and regulated by the Building Standards Commission. See Section 103 for additional scoping provisions.
2. Energy efficiency standards regulated by the California Energy Commission.
3. Low-rise residential buildings constructed throughout the State of California, including but not limited to, hotels, motels, lodging houses, apartment houses, dwellings, dormitories, condominiums, shelters for homeless persons, congregate residences, employee housing, factory-built housing and other types of dwellings containing sleeping accommodations with or without common toilets or cooking facilities regulated by the Department of Housing and Community Development. See Section 104 for additional scoping provisions.
4. Public elementary and secondary schools, and community college buildings regulated by the Division of the State Architect. See Section 105 for additional scoping provisions.
5. Qualified historical buildings and structures and their associated sites regulated by the State Historical Building Safety Board within the Division of the State Architect.
6. General acute care hospitals, acute psychiatric hospitals, skilled nursing and/or intermediate care facilities, clinics licensed by the Department of Public Health and correctional treatment centers regulated by the Office of Statewide Health Planning and Development. See Section 106 for additional scoping provisions.
7. Graywater systems regulated by the Department of Water Resources and the Department of Housing and Community Development.

**101.3.2 Exempted projects.** Projects that are exempted from complying with the Mountain View Green Building Code are:

1. Accessory structures;
2. Registered or eligible to be registered local, state or federal historic structures;
3. Natural disaster repairs;
4. Temporary structures;
5. Improvements that include residential interior alterations (i.e. remodels) only;
6. Residential additions less than 1,000 square feet; and
7. Nonresidential tenant improvements less than 15,000 square feet with a construction valuation less than \$100,000.

**101.4 Appendices.** Provisions contained in the appendices of this code are not mandatory unless specifically adopted by a State agency or adopted by a city, county, or city and county in compliance with *Health and Safety Code* Sections 18930 and 18941.5, respectively, for Building Standards Law; *Health and Safety Code* Section 17950 for State Housing Law; and *Health and Safety Code* Section 13869.7 for Fire Protection Districts. See Section 101.7 of this code.

**101.5 Referenced codes and standards.** The codes and standards referenced elsewhere in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference.

**101.5.1 Building.** The provisions of the *California Building Code* and *California Residential Code*, as applicable, shall apply to the construction, alteration, movement, enlargement, replacement, repair, use and occupancy, location, maintenance, removal and demolition of every structure or any appurtenances connected or attached to such buildings or structures.

**101.5.2 Electrical.** The provisions of the *California Electrical Code* shall apply to the installation of electrical systems, including but not limited to, alterations, repair, replacement, equipment, appliances, fixtures, fittings and appurtenances thereto.

**101.5.3 Mechanical.** The provisions of the *California Mechanical Code* shall apply to the installation, alterations, repair and replacement of mechanical systems, including equipment, appliances, fixtures, fittings and/or appurtenances, including ventilating, heating, cooling, air-conditioning and refrigeration systems, incinerators and other energy-related systems.

**101.5.4 Plumbing.** The provisions of the *California Plumbing Code* shall apply to the installation, alteration, repair and replacement of plumbing systems, including equipment, appliances, fixtures, fittings and appurtenances where connected to a water or sewage system.

**101.5.5 Fire prevention.** The provisions of CCR, Title 19, Division 1 and CCR, Title 24, Part 2 and Part 9 relating to fire and panic safety as adopted by the Office of the State Fire Marshal shall apply to all structures, processes and premises for protection from the hazard of fire, panic and explosion.

**101.5.6 Energy.** The provisions of the *California Energy Code* shall apply to the minimum design and construction of buildings for energy efficiency.

## **101.6 Order of precedence and use.**

**101.6.1 Differences.** In the event of any differences between these building standards and the standard reference documents, the text of these building standards shall govern. In the event a local amendment to this code results in differences between these building standards and the amendment, the text of the amendment shall govern.

**101.6.2 Specific provision.** Where a specific provision varies from a general provision, the specific provision shall apply.

**101.6.3 Conflicts.** When the requirements of this code conflict with the requirements of any other part of the *California Building Standards Code*, Title 24, the most restrictive requirement shall prevail.

**101.6.4. Explanatory notes.** Explanatory material, such as references to websites or other sources where additional information may be found, is included in this code in the form of notes. Notes are informational only and are not enforceable requirements of this code.

**101.7 City, county, or city and county amendments, additions or deletions.** This code is intended to set mandatory minimum Green Building Standards and includes optional tiers that may, at the discretion of any city, county, or city and county, be applied.

This code does not limit the authority of city, county, or city and county governments to make necessary changes to the provisions contained in this code pursuant to Section 101.7.1. The effective date of amendments, additions, or deletions to this code for cities, counties, or cities and counties filed pursuant to Section 101.7.1 shall be the date on which it is filed. However, in no case shall the amendments, additions or deletions to this code be effective any sooner than the effective date of this code.

Local modifications shall comply with *Health and Safety Code* Section 18941.5(b) for Building Standards Law, *Health and Safety Code* Section 17958.5 for State Housing Law or *Health and Safety Code* Section 13869.7 for Fire Protection Districts.

### **101.7.1 Findings and filings.**

1. The city, county, or city and county shall make express findings for each amendment, addition or deletion based upon climatic, topographical or geological conditions. For the purpose of this section, climatic, topographical or geological conditions include local environmental conditions as established by the city, county, or city and county.

2. The city, county, or city and county shall file the amendments, additions or deletions expressly marked and identified as to the applicable findings. Cities, counties, cities and counties, and fire departments shall file the amendments, additions or deletions and the findings with the California Building Standards Commission at 2525 Natomas Park Drive, Suite 130, Sacramento, CA 95833.

3. Findings prepared by fire protection districts shall be ratified by the local city, county, or city and county and filed with the California Department of Housing and Community Development at 1800 3<sup>rd</sup> Street, Room 260, Sacramento, CA 95811.

4. The city, county, or city and county shall obtain California Energy Commission approval for any energy related ordinances consistent with *Public Resources Code* Section 25402.1(h)(2) and Title 24, Part 1, Section 10-106. Local governmental agencies may adopt and enforce energy standards for newly constructed buildings, additions, alterations and repairs, provided the California Energy Commission finds that the standards will require buildings to be designed to consume no more energy than permitted by Part 6. Such local standards include, but are not limited to, adopting the requirements of Part 6 before their effective date, requiring additional energy conservation measures, or setting more stringent energy budgets.

**101.8 Alternate materials, designs and methods of construction.** The provisions of this code are not intended to prevent the use of any alternate material, appliance, installation, device, arrangement, method, design or method of construction not specifically prescribed by this code, provided that any such alternative has been approved. An alternate shall be approved on a case-by-case basis where the enforcing agency finds that the proposed alternate is satisfactory and complies with the intent of the provisions of this code and is at least the equivalent of that prescribed in this code in planning and design, energy, water, material conservation and resource efficiency, environmental air quality, performance, safety and the protection of life and health. Consideration and compliance provisions for occupancies regulated by adopting state agencies are found in the sections listed below.

1. Section 1.2.2 in the *California Building Code* (CBC) for the California Building Standards Commission.
2. Section 104.11 of Chapter 1, Division II for the Division of the State Architect.
3. Section 1.8.7, Chapter 1, Administration, Division 1, of the 2010 *California Building Code* and Section 1.2.6, Chapter 1, Administration, Division 1, of the 2010 *California Residential Code* for the Department of Housing and Community Development.
4. Section 7-104, 2010 *California Administrative Code* for the Office of the Statewide Health Planning and Development.

**101.9 Effective date of this code.** Only those standards approved by the California Building Standards Commission that are effective at the time an application for a building permit is submitted shall apply to the plans and specifications for, and to the construction performed under, that permit. For the effective dates of the provisions contained in this code, see the appropriate application checklist and the History Note page of this code.

**101.9.1 Adoption of Mountain View amendments.** Mountain View amendments to the 2010 California Green Building Standards Code shall be effective 30 days after adoption by the City Council.

**101.10 Mandatory requirements.** This code contains the minimum mandatory green building measures and energy requirements as required by the City of Mountain View. All new structures in the City must comply with the mandatory measures of the 2010 California Green Building Standards Code as adopted by the State in addition to local amendments included in this code. This includes all residential new construction projects regardless of height or number of stories. Additionally, applicants must demonstrate that the area of improvement or new construction has an energy efficiency that is, at minimum, a specified percentage above the 2008 California Energy Code requirement in Title 24, Part 6.

**101.10.1 Project types.** Table 101.10 Mandatory Green Building Requirements details the project types that are required to comply with this code.

**101.10.1.1 Residential projects.** All residential projects (single-family and multi-family) regulated by this code must comply with Mountain View's energy and green building requirements as listed below.

**101.10.1.1.1 Residential additions.** All residential additions with conditioned space greater than or equal to 1,000 square feet (gross) must comply with the applicable section of the code listed below if the addition (including interior improvements within the existing structure) includes any of the following:

- A. Additions or alterations to plumbing fixtures must comply with Section 4.303 (Indoor Water Use);
- B. Replacement or installation of new interior finish materials (i.e. flooring, carpeting, paint, etc) must comply with Section 4.504 (Pollutant Control); and
- C. New square footage to the existing structure must demonstrate energy compliance at least 10% above Title 24, Part 6.

Additionally, projects that include additions and interior alterations may use the total area (in square feet) of improvements in the Title 24 Energy Calculations and may account for energy-efficiency upgrades that already exist in the structure, assuming the upgrades comply with the 2008 California Energy Code.

**101.10.1.1.2 Residential new construction – Less than five (5) units.** All residential new construction less than five (5) units must comply with the following:

- A. The mandatory measures of the California Green Building Standards Code and any Mountain View amendments; and
- B. Must demonstrate energy compliance at least 15% above Title 24, Part 6.

**101.10.1.1.3 Residential new construction – Five (5) units or more.** All residential new construction with five (5) units or more must comply with the following:

- A. The mandatory measures of the California Green Building Standards Code and any Mountain View amendments;
- B. Meet the intent of seventy (70) GreenPoint Rated points; and
- C. Must demonstrate the appropriate energy compliance above Title 24, Part 6 based on the following project characteristics:
  1. Low-rise residential building (up to three stories in height) – 15% above Title 24, Part 6.
  - or
  2. High-rise residential building (over three stories in height) – 15% above Title 24, Part 6.
 Plug and lighting energies may be deducted from both the standard and proposed building models when conducting the energy calculations.

**101.10.1.2 Nonresidential projects.** All nonresidential projects regulated by this code must comply with Mountain View's energy and green building requirements as listed below.

**101.10.1.2.1 Nonresidential tenant improvements.** All nonresidential tenant improvements 15,000 square feet (gross) or greater with a \$100,000 construction valuation must comply with the applicable section of the code listed below if the improvements include any of the following:

- A. Alterations to plumbing fixtures must comply with Section 5.303 (Indoor Water Use);
- B. Replacement or installation of new interior finish materials (i.e. flooring, carpeting, paint, etc) must comply with Section 5.504 (Pollutant Control); and
- C. Any lighting improvements that require a Title 24 Energy Calculation must demonstrate energy compliance at least 10% above Title 24, Part 6 for lighting only.

**101.10.1.2.2 Nonresidential new construction – Less than 5,000 square feet.** All nonresidential new construction less than 5,000 square feet (gross) must comply with the following:

- A. Meet the mandatory measures of the California Green Building Standards Code and any Mountain View amendments; and**
- B. Must demonstrate energy compliance 10% above Title 24, Part 6.**

**101.10.1.2.3 Nonresidential new construction – 5,000 through 25,000 square feet.** All nonresidential new construction 5,000 through 25,000 square feet (gross) must comply with the following:

- A. Meet the mandatory measures of the California Green Building Standards Code and any Mountain View amendments;**
- B. Meet the intent of LEED® Certified; and**
- C. Must demonstrate energy compliance 10% above Title 24, Part 6.**

**101.10.1.2.4 Nonresidential new construction – greater than 25,000 square feet.** All nonresidential new construction greater than 25,000 square feet (gross) must comply with the following:

- A. Meet the mandatory measures of the California Green Building Standards Code and any Mountain View amendments;**
- B. Meet the intent of LEED® Silver certified; and**
- C. Must demonstrate energy compliance 10% above Title 24, Part 6.**

**101.10.1. 3 Mixed Use Projects.** All new mixed-use construction projects must comply with Mountain View's energy and green building requirements and meet the requirements applicable to each primary occupancy component. See *Table 101.10* for mixed-use project types that apply.

Table 101.10 Mandatory Green Building Requirements		
Project Type	Energy Requirement <sup>1</sup>	Green Building Standard and Requirement
RESIDENTIAL PROJECTS (SINGLE FAMILY, MULTI-FAMILY)		
New Construction		
New Residential < 5 units	15% above Title 24, Part 6	Mandatory CalGreen Requirements
New Residential ≥ 5 units	15% above Title 24, Part 6 <sup>2</sup>	Meet the intent of 70 GreenPoint Rated points <u>and</u> Mandatory CalGreen Requirements
Additions <sup>3</sup> (applies to conditioned space only)		
Additions ≥ 1,000 square feet	10% above Title 24, Part 6	Mandatory CalGreen Requirements: Sect. 4.303 (Indoor Water Use) Sect. 4.504 (Pollutant Control)
MIXED USE PROJECTS		
New Construction		
New Residential < 5 units <u>and</u> New Nonresidential Use < 25,000 square feet	15% above Title 24, Part 6 for Residential; 10% above Title 24, Part 6 for Nonresidential	Residential and Nonresidential criteria as applicable to each component of the project.
New Residential ≥ 5 units <u>and</u> New Nonresidential Use ≥ 25,000 square feet	15% above Title 24, Part 6 for Residential; 10% above Title 24, Part 6 for Nonresidential	
NONRESIDENTIAL PROJECTS (INCL. HOTEL <sup>2</sup> )		
New Construction <sup>4</sup>		
New Nonresidential Buildings < 5,000 square feet	10% above Title 24, Part 6	Mandatory CalGreen Requirements
New Nonresidential Buildings 5,000 - 25,000 square feet	10% above Title 24, Part 6	Meet the intent of LEED® Certified <u>and</u> Mandatory CalGreen Requirements
New Nonresidential Buildings > 25,000 square feet	10% above Title 24, Part 6	Meet the intent of LEED® Silver <u>and</u> Mandatory CalGreen Requirements
Tenant Improvements		
Tenant Improvements ≥ 15,000 square feet with a \$100,000 construction valuation where the scope of work includes any of the following: 1) requires a Title 24 Energy calculation; 2) the replacement or addition of any plumbing fixtures and/or interior finish materials (i.e. carpeting, paint, etc).	10% above Title 24, Part 6 for Lighting Only	Mandatory CalGreen Requirements: Sect. 5.303 (Indoor Water Use) Sect. 5.504 (Pollutant Control)
<div>1. On-site generation of renewable energy in an amount equivalent to the required reductions may be used as an alternate means to meet the local energy requirement. Energy production shall be determined through use of the CECPV Calculator provided by the California Energy Commission.</div> <div>2. For high-rise residential buildings (over three stories in height) and hotels, plug and lighting energies can be deducted from both the standard and proposed building when conducting the Title 24, Part 6 energy calculations.</div> <div>3. Residential additions that include interior alterations may use the total area (in square feet) of improvements in the Title 24 energy calculations and may account for energy efficiency upgrades that already exist in the structure, assuming the upgrades comply with the 2008 Building Energy Efficiency Standards.</div> <div>4. New shell construction with minimally installed systems are required to attain the following energy requirements above Title 24, Part 6: Cold Shell (no HVAC and no lighting) - 5% or Warm Shell (includes HVAC and no lighting) - 7%.</div>		



**101.10.2 Alternate green building standards.** If an applicant proposes to use an alternate green building standard not included in this code, they must demonstrate that the alternate standard is, at minimum, equivalent to the referenced standard in terms of criteria, scope and certification process. The chief building official must approve the alternate standard prior to issuing a building permit.

**101.10.3 Certification.** The city does not require projects to be certified by a third party green building organization, unless certification is a condition of approval for a Zoning Permit. Applicants must demonstrate the project “meets the intent” of the required standard through documentation and verification consistent with the criteria and documentation process of the respective green building rating system. This includes meeting all mandatory prerequisites and minimum point totals of each category, if required by the rating system.

**101.11 Effective use of this code.** The following steps shall be used to establish which provisions of this code are applicable to a specific occupancy:

1. Establish the type of occupancy.
2. Verify which state agency has authority for the established occupancy by reviewing the authorities list in Sections 103 through 106.
3. Once the appropriate agency has been identified, find the chapter which covers the established occupancy.
4. The Matrix Adoption Tables at the beginning of Chapters 4 and 5 identify the mandatory green building measures necessary to meet the minimum requirements of this code for the established occupancy. Occupancies regulated by this code must also comply with the green building requirements included in Chapter 1.
5. Voluntary tier measures are contained in Appendix Chapters A4 and A5. A checklist containing each green building measure, both required and voluntary, is provided at the end of each appendix chapter. Each measure listed in the application checklist has a section number which correlates to a section where more information about the specific measure is available.
6. The application checklist identifies which measures are required by this code and allows users to check off which voluntary items have been selected to meet voluntary tier levels if desired or mandated by a city, county, or city and county.

## **SECTION 102**

### **DOCUMENTATION AND VERIFICATION**

**102.1 Submittal documents.** Construction documents and other data shall be submitted in one or more sets with each application for a permit. Where special conditions exist, the City is authorized to require additional construction documents to be prepared by the applicant or a licensed design professional, depending on the size of the project (see Section 102.4 for details), and may be submitted separately.

**When submitting for building permits for a project regulated by this code, the applicant shall submit the following materials:**

1. The appropriate completed green building checklist;
2. Project construction documentation (plans and specifications) that verifies incorporation of the design and construction-related credits;
3. A letter of acknowledgement from the applicant, licensed professional, or qualified green building professional indicating that the project has been designed to achieve the sustainability standards defined in this Code and in accordance with the approved green building checklist. The letter shall indicate the number of points the project has been designed to achieve. The letter shall also commit to compliance with Mountain View’s energy requirements;



3. Any additional documentation such as maps, calculations, or product information that would be required by U.S. Green Building Council for LEED® certification or by Build It Green for GreenPoint Rated certification; and
4. Any additional information believed to be relevant by the City in determining that a good-faith effort has been made to comply with this Code.

**Exception:** The enforcing agency is authorized to waive the submission of construction documents and other data not required to be prepared by a licensed design professional.

**102.2 Information on construction documents.** Construction documents shall be of sufficient clarity to indicate the location, nature and scope of the proposed green building feature and show that it will conform to the provisions of this code, the *California Building Standards Code* and other relevant laws, ordinances, rules and regulations as determined by the **City**.

**102.3 Hardship or infeasibility exemption.** If an applicant believes circumstances exist that make it a hardship or infeasible to meet the requirements of this code, the applicant may request an exemption. The applicant must still comply with the mandatory measures in the California Green Building Code and can only receive an exemption from the Mountain View amendments to the code. In applying for an exemption, the burden is on the applicant to show hardship or infeasibility. An exemption will only be granted in unusual circumstances where due to exceptional characteristics of the structure or property involved, a literal enforcement of this code will result in practical difficulties or unnecessary hardships, provided that no such exception will be contrary to the intent of this code.

**102.3.1 Proof of Hardship or Infeasibility.** The applicant shall submit a letter indicating the maximum threshold of compliance that is feasible for the project and the circumstances that create a hardship or make it infeasible to comply fully with this Code.

**102.3.2 Approval or Denial of Exemption.** The chief building official will determine if it is infeasible for the project to comply fully with this code and approve an alternative requirement. This alternative requirement can be, but is not limited to, reducing the energy efficiency requirement or the amount of green building measures required. For all approved exemptions, the project must continue to comply with the minimum requirements of the California Building Energy Efficiency Standard (Title 24, Part 6) and the mandatory measures of the California Green Building Code. The applicant will be notified of the final decision by the chief building official.

**102.4 Verification.** Documentation of conformance for applicable green building measures shall be provided to the **city**. Alternate methods of documentation shall be acceptable when the **city** finds that the proposed alternate documentation is satisfactory to demonstrate substantial conformance with the intent of the proposed green building measure.

**102.4.1 Self-verification.** The burden of proving compliance with this code is on the applicant. The verification professional must provide evidence of adequate green building compliance or documentation to the building division to satisfy the requirements of this Code.

**102.4.1.1 Verification professional** – The applicant or industry professional filing on behalf of the applicant must be the individual who verifies the project complies with the requirements of this code.

1. For residential additions and nonresidential tenant improvements regulated by this code, this individual can be a licensed industry professional, an authorized tenant or the property owner.
2. For all nonresidential and residential new construction projects regulated by this code, this individual must be a qualified green building professional with an industry license, such as an architect or contractor, or a professional with similar qualifications acceptable to the chief building official.

**102.4.2 Noncompliance.** If, as a result of any inspection, the City determines that the project does not or is unlikely to comply with the approved plans or green building program, a stop work order shall be issued if the inspector determines that continuation of construction activities will lessen the project's

ability to meet the required compliance threshold. The stop work order shall remain in effect until the chief building official determines the project will be brought into compliance with the approved plans and/or verification documents.

## **SECTION 103 BUILDING STANDARDS COMMISSION**

**103.1** Specific scope of application of the agency responsible for enforcement, the enforcement agency, and the specific authority to adopt and enforce such provisions of this code, unless otherwise stated.

### **1. All occupancies.**

**Application**—New construction, unless otherwise indicated in this code, of State buildings (all occupancies), including buildings constructed by the Trustees of the California State University and the Regents of the University of California and all occupancies where no state agency has the authority to adopt building standards applicable to such buildings.

**Enforcing agency**—State or local agency specified by the applicable provisions of law.

**Authority cited**—*Health and Safety Code* Sections 18930.5, 18934.5 and 18938 (b).

**Reference**—*Health and Safety Code*, Division 13, Part 2.5, commencing with Section 18901.

### **2. University of California, California State Universities and California Community Colleges.**

**Application**—Standards for lighting for parking lots and primary campus walkways at the University of California, California State Universities and California Community Colleges.

**Enforcing agency**—State or local agency specified by the applicable provisions of law.

**Authority cited**—*Government Code* Section 14617.

**Reference**—*Government Code* Section 14617.

### **3. Existing State-Owned Buildings, including those owned by the University of California and by the California State University.**

**Application**—Building seismic retrofit standards including abating falling hazards of structural and nonstructural components and strengthening of building structures. See also Division of the State Architect.

**Enforcing agency**—State or local agency specified by the applicable provisions of law.

**Authority cited**—*Government Code* Section 16600.

**Reference**—*Government Code* Sections 16600 through 16604.

### **4. Unreinforced Masonry Bearing Wall Buildings.**

**Application**—Minimum seismic strengthening standards for buildings specified in Appendix Chapter 1 of the *California Code for Building Conservation*, except for buildings subject to building standards adopted pursuant to Part 1.5 (commencing with Section 17910).

**Enforcing agency**—State or local agency specified by the applicable provisions of law.

**Authority cited**—*Health and Safety Code* Section 18934.6.

**Reference**—*Health and Safety Code* Sections 18901 through 18949.

## **SECTION 104 DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT**

**104.1** Specific scope of application of the agency responsible for enforcement, the enforcement agency and the specific authority to adopt and enforce such provisions of this code, unless otherwise stated.

### **1. Housing construction.**

**Application**—Hotels, motels, lodging houses, apartment houses, dwellings, dormitories, condominiums, shelters for homeless persons, congregate residences, employee housing, factory-built housing and other types of dwellings containing sleeping accommodations with or without common toilet or cooking facilities including accessory buildings, facilities and uses thereto. Sections of this code which pertain to applications listed in this section are identified in the Matrix Adoption Table using the abbreviation “HCD 1.”

**Enforcing agency**—Local building department or the Department of Housing and Community Development.

**Authority cited**—*Health and Safety Code* Sections 17921, 17922 and 19990.

**Reference**—*Health and Safety Code* Sections 17000 through 17060, 17910 through 17990 and 19960 through 19997.

## **SECTION 105 DIVISION OF THE STATE ARCHITECT**

**105.1** Specific scope of application of the agency responsible for enforcement, the enforcement agency, and the specific authority to adopt and enforce such provisions of this code, unless otherwise stated.

**105.1.1 Application**—**Public elementary and secondary schools and community colleges.** New construction on a new campus site or new construction on an existing site cleared of all existing structures.

**Enforcing agency**—The Division of the State Architect-Structural Safety (DSA-SS) has been delegated the responsibility and authority by the Department of General Services to review and approve the design and observe the construction of public elementary and secondary schools, and community colleges.

**Authority cited**—*Education Code* Sections 17310 and 81142.

**Reference**—*Education Code* Sections 17280 through 17317, and 81130 through 81147.

### **105.1.2 Applicable administrative standards.**

**1. Title 24, Part 1, California Code of Regulations:** Sections 4-301 through 4-355, Group 1, Chapter 4, for public elementary and secondary schools, and community colleges.

**2. Title 24, Part 2, California Code of Regulations:** 2.1. Sections 1.1 and 1.9.2 of Chapter 1, Division I. 2.2. Sections 102.1, 102.2, 102.3, 102.4, 102.5, 104.9, 104.10 and 104.11 of Chapter 1, Division II.

**105.1.3 Applicable building standards.** *California Building Standards Code*, Title 24, Parts 2, 3, 4, 5, 6, 9, 11 and 12, *California Code of Regulations*, for school buildings and community colleges.

## SECTION 106

### OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT

**106.1 OSHPD 1.** Specific scope of application of the agency responsible for enforcement, enforcement agency and the specific authority to adopt and enforce such provisions of this code, unless otherwise stated.

**Application**—General acute care hospitals and acute psychiatric hospitals, excluding distinct part units or distinct part freestanding buildings providing skilled nursing or intermediate care services. For structural regulations: Skilled nursing facilities and/or intermediate care facilities except those skilled nursing facilities and intermediate care facilities of single-story, Type V, wood or light steel-frame construction.

**Enforcing agency**—Office of Statewide Health Planning and Development (OSHPD). The office shall enforce the Division of the State Architect—Access Compliance regulations and the regulations of the Office of the State Fire Marshal for the above-stated facility types.

#### 106.1.1 Applicable administrative standards.

1. Title 24, Part 1, *California Code of Regulations*: Chapters 6 and 7.
2. Title 24, Part 2, *California Code of Regulations*: Sections 1.1 and 1.10 of Chapter 1, Division I and Chapter 1, Division II.

**106.1.2 Applicable building standards.** *California Building Standards Code*, Title 24, Parts 2, 3, 4, 5, 9, 11 and 12.

**106.1.3 Identification of amendments.** For applications listed in Section 106.1, amendments appear in this code preceded with the acronym [OSHPD 1].

**Authority**—*Health and Safety Code* Sections 127010, 127015, 1275 and 129850.

**References**—*Health and Safety Code* Sections 19958, 127010, 127015, 129680, 1275 and 129675 through 130070.

**106.2 OSHPD 2.** Specific scope of application of the agency responsible for enforcement, enforcement agency and the specific authority to adopt and enforce such provisions of this code, unless otherwise stated.

**Application**—Skilled nursing facilities and intermediate care facilities, including distinct part skilled nursing and intermediate care services on a general acute care or acute psychiatric hospital license, provided either are in a separate unit or a freestanding building. For structural regulations: Single-story, Type V skilled nursing facility and/or intermediate care facilities utilizing wood or light steel-frame construction.

**Enforcing agency**—Office of Statewide Health Planning and Development (OSHPD). The office shall also enforce the Division of the State Architect—Access Compliance regulations and the regulations of the Office of the State Fire Marshal for the above-stated facility type.

#### 106.2.1 Applicable administrative standards.

1. Title 24, Part 1, *California Code of Regulations*: Chapter 7.

2. Title 24, Part 2, *California Code of Regulations*: Sections 1.1 and 1.10 of Chapter 1, Division I and Chapter 1, Division II.

**106.2.2 Applicable building standards.** *California Building Standards Code*, Title 24, Parts 2, 3, 4, 5, 9, 11 and 12.

**106.2.3 Identification of amendments.** For applications listed in Section 106.2, amendments appear in this code preceded with the acronym [OSHDP 2].

**Authority**—*Health and Safety Code* Sections 127010, 127015, 1275 and 129850.

**References**—*Health and Safety Code* Sections 127010, 127015, 1275 and 129680.

**106.3 OSHPD 4.** Specific scope of application of the agency responsible for enforcement, enforcement agency and the specific authority to adopt and enforce such provisions of this code, unless otherwise stated.

**Application**—Correctional treatment centers.

**Enforcing agency**—Office of Statewide Health Planning and Development (OSHDP). The office shall also enforce the Division of the State Architect—Access Compliance regulations and the regulations of the Office of the State Fire Marshal for the above-stated facility types.

**106.3.1 Applicable administrative standards.**

1. Title 24, Part 1, *California Code of Regulations*: Chapter 7.

2. Title 24, Part 2, *California Code of Regulations*: Sections 1.1 and 1.10 of Chapter 1, Division I and Chapter 1, Division II.

**106.3.2 Applicable building standards.** *California Building Standards Code*, Title 24, Parts 2, 3, 4, 5, 9, 11 and 12.

**106.3.3 Identification of amendments.** For applications listed in Section 106.4, amendments appear in this code preceded with the acronym [OSHDP 4], unless the entire chapter is applicable.

**Authority**—*Health and Safety Code* Sections 127010, 127010, 127015 and 129790.

**References**—*Health and Safety Code* Sections 127010, 127015, 1275, and 129675 through 130070.

## MOUNTAIN VIEW GREEN BUILDING CODE – MATRIX ADOPTION TABLE

### CHAPTER 2 – DEFINITIONS

Adopting agency	BSC	SFM	HCD			DSA		OSHDP				CSA	DPH	AGR	DWR	CEC	CA	SL	SLC
			1	2	1-AC	AC	SS	1	2	3	4								
Adopt entire CA chapter	X		X																
Adopt entire chapter as amended (amended sections listed below)								X	X		X								
Adopt only those sections that are listed below							X												
Chapter/Section																			
201							X												
202 AUTOMATIC							X												
202 BUILDING ENVELOPE							X												
202 CALIFORNIA BUILDING CODE							X												
202 CALIFORNIA ELECTRICAL CODE							X												
202 CALIFORNIA ENERGY CODE							X												
202 CALIFORNIA MECHANICAL CODE							X												
202 CALIFORNIA PLUMBING CODE							X												
202 CALIFORNIA RESIDENTIAL CODE								†	†		†								
202 CONDITIONED SPACE							X												
202 COOLING EQUIPMENT							X												
202 ENERGY COMMISSION							X												
202 ENFORCING AGENCY							X												
202 GREEN BUILDING							X												
202 INFILTRATION							X												
202 KITCHEN							X												
202 LOW-RISE RESIDENTIAL BUILDING							X	†	†		†								
202 OUTDOOR AIR (Outside air)							X												
202 PLANTS								†	†		†								
202 RESIDENTIAL BUILDING							X	†	†		†								
202 RESILIENT FLOORING							X	†	†		†								
202 VAPOR BARRIER							X												

The state agency does not adopt sections identified by the following symbol: †

## CHAPTER 2 DEFINITIONS

### SECTION 201 GENERAL

**201.1 Scope.** Unless otherwise stated, the following words and terms shall, for the purposes of this code, have the meanings shown in this chapter.

**201.2 Interchangeability.** Words used in the present tense include the future; words stated in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural, the singular.

**201.3 Terms defined in other documents.** Where terms are not defined in this code and are defined in the *California Building Standards Code* or other referenced documents, such terms shall have the meanings ascribed to them as in those publications.

**201.4 Terms not defined.** Where terms are not defined as specified in this section, such terms shall have ordinarily accepted meanings such as the context implies.

## SECTION 202 DEFINITIONS

**ADDITION.** New construction square footage added to an existing structure.

**ALTERNATE GREEN BUILDING STANDARD.** A private, third-party green building rating system not explicitly referenced in this code that achieves green building goals through a comprehensive checklist of requirements. To use an alternate standard, the applicant must prove it is at least equivalent to the referenced green building standard.

**APPLICANT.** Any entity or any subsequent owner of the site that applies to the city for the applicable permits to undertake any project types regulated by this code.

**AREA OF IMPROVEMENT.** The area (in square feet) where interior building improvements are proposed. Such improvements can include, but are not limited to, painting, installing carpet or flooring, replacing or upgrading mechanical, electrical or plumbing systems.

**AUTOMATIC.** Automatic means capable of operating without human intervention.

**BUILDING ENVELOPE.** The ensemble of exterior and demising partitions of a building that enclose conditioned space.

**CALIFORNIA BUILDING CODE.** The current version of the *California Building Code*.

**CALIFORNIA ELECTRICAL CODE.** The current version of the *California Electrical Code*.

**CALIFORNIA ENERGY CODE.** The current version of the *California Energy Code*, unless otherwise specified.

**CALIFORNIA MECHANICAL CODE.** The current version of the *California Mechanical Code*.

**CALIFORNIA PLUMBING CODE.** The current version of the *California Plumbing Code*.

**CALIFORNIA RESIDENTIAL CODE.** The current version of the *California Residential Code*.

**CITY.** City means the City of Mountain View.

**CONDITIONED FLOOR AREA.** The floor area (in square feet) of enclosed conditioned space on all floors of a building, as measured at the floor level of the exterior surfaces of exterior walls enclosing the conditioned space.

**CONDITIONED SPACE.** A space in a building that is either directly conditioned or indirectly conditioned.

**CONDITIONED SPACE, DIRECTLY.** An enclosed space that is provided with wood heating, is provided with mechanical heating that has a capacity exceeding 10 Btu/hr-ft<sup>2</sup>, or is provided with mechanical cooling that has a capacity exceeding 5 Btu/hr-ft<sup>2</sup>, unless the space-conditioning system is designed for a process space. (See Process Space.)



**CONDITIONED SPACE, INDIRECTLY.** Enclosed space, including but not limited to, unconditioned volume in atria, that (1) is not directly conditioned space; and (2) either (a) has a thermal transmittance area product (UA) to directly conditioned space exceeding that to the outdoors or to unconditioned space and does not have fixed vents or openings to the outdoors or to unconditioned space, or (b) is a space through which air from directly conditioned spaces is transferred at a rate exceeding three air changes per hour.

**COOLING EQUIPMENT.** Equipment used to provide mechanical cooling for a room or rooms in a building.

**DISPOSAL.** The management of solid waste through landfilling or transformation at permitted solid waste facilities.

**DIVERSION.** Activities which reduce or eliminate the amount of solid waste from solid waste disposal for purposes of this code.

**ENERGY COMMISSION.** The California State Energy Resources Conservation and Development Commission.

**ENFORCING AGENCY.** The community development department in the City of Mountain View as specified by this code.

**EXFILTRATION.** The uncontrolled outward air leakage from inside a building, including leakage through cracks and interstices, around windows and doors, and through any other exterior partition or duct penetration.

**GREEN BUILDING.** A holistic approach to design, construction, and demolition that minimizes the building's impact on the environment, the occupants and the community.

**GREEN BUILDING CERTIFICATION INSTITUTE (GBCI™).** Oversees and administers the building certifications and professional designations for the U.S. Green Building Council's LEED® Green Building Rating Systems™.

**GREEN POINT RATED (GPR).** Refers to a residential green building rating system developed by Build It Green. Projects can use any of the adopted GPR checklists that most appropriately apply to the project type proposed.

#### **HAZARDOUS WASTE.**

(a) A waste, defined as a "hazardous waste" in accordance with Section 25117 of the *Health and Safety Code*, or a combination of wastes, which because of its quantity, concentration or physical, chemical or infectious characteristics may do either of the following:

(1) Cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness.

(2) Pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of, or otherwise managed.

(b) Unless expressly provided otherwise, "hazardous waste" includes extremely hazardous waste and acutely hazardous waste.

**INERT SOLIDS OR INERT WASTE.** A non-liquid solid waste including, but not limited to, soil and concrete, that does not contain hazardous waste or soluble pollutants at concentrations in excess of water-quality objectives established by a regional water board pursuant to Division 7 (commencing with Section 13000) of the *California Water Code* and does not contain significant quantities of decomposable solid waste.

**INFILTRATION.** An uncontrolled inward air leakage from outside a building or unconditioned space, including leakage through cracks and interstices, around windows and doors and through any other exterior or demising partition or pipe or duct penetration.

**KITCHEN.** That portion in a residential dwelling unit that is a room or area used for cooking, food storage and preparation and washing dishes, including associated counter tops and cabinets, refrigerator, stove, ovens and floor area.

**LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN (LEED®).** Refers to a green building rating system developed by U.S. Green Building Council for residential and nonresidential projects. Projects can use any of the adopted LEED® checklists that most appropriately apply to the project type proposed.

**LOW-RISE RESIDENTIAL BUILDING.** A building that is of Occupancy Group R and is three stories or less, or that is a one- or two-family dwelling or townhouse.

**MEET THE INTENT.** To demonstrate compliance with the green building requirements of LEED® or GPR without formally submitting documentation to U.S. Green Building Council's Green Building Certification Institute or Build It Green for verification and certification. The applicant must follow the approaches and procedures in the guidebook or reference guides for respective rating systems and submit the required documentation and verification materials as outlined in Section 102 of this code to the community development department. This includes meeting all mandatory prerequisites and minimum point totals of each category, if required per the rating system.

**MIXED-USE.** The construction of a building or buildings that include both commercial and residential uses.

**NEWLY CONSTRUCTED (or NEW CONSTRUCTION).** A newly constructed building (or new construction) does not include additions, alterations or repairs.

**NONRESIDENTIAL BUILDING.** Any building constructed or occupied for a use other than residential, which may include, but is not limited to, commercial or hotel uses.

**OUTDOOR AIR (Outside air).** Air taken from outdoors and not previously circulated in the building.

## **PLANTS.**

**Adaptive plants.** Adaptive plants are plants that grow well in a given habitat with minimal attention in the form of winter protection, pest protection, irrigation and fertilization once established.

**Note:** Adaptive plants are considered low in maintenance and are not invasive plants.

**Invasive plants.** Invasive plants are both indigenous and non-indigenous species with growth habits that are characteristically aggressive.

**Note:** Invasive plants typically have a high reproductive capacity and tendency to overrun the ecosystems they inhabit.

**Native plants.** Native plants are plants that have adapted to a given area and are not invasive.

**PROCESS SPACE.** A space that is thermostatically controlled to maintain a process environment temperature less than 55°F or to maintain a process environment temperature greater than 90° F for the whole space that the system serves, or that is a space with a space-conditioning system designed and controlled to be incapable of operating at temperatures above 55° F or incapable of operating at temperatures below 90° F at design conditions.

**PROJECT.** Any proposed development that is regulated by this code.

**QUALIFIED GREEN BUILDING PROFESSIONAL.** A licensed professional, such as an architect or contractor, trained through the Green Building Certification Institute as a LEED AP® or through Build It Green as a certified green building professional, or similar qualifications if acceptable to the chief building official.

**RECYCLE or RECYCLING.** The process of collecting, sorting, cleansing, treating and reconstituting materials that would otherwise become solid waste, and returning them to the economic mainstream in the form of raw material for new, reused or reconstituted products which meet the quality standards necessary to be used in the marketplace. “Recycling” does not include transformation, as defined in *Public Resources Code* Section 40201.

**RESIDENTIAL BUILDING.** See “low-rise residential building.”

**RESILIENT FLOORING.** Refers to nontextile flooring materials which have a relatively firm surface, yet characteristically have “give” and “bounce back” to their original surface profile from the weight of objects that compress its surface. Resilient flooring materials are made in various shapes and sizes including both tile and roll form. Common types of resilient flooring include but are not limited to:

1. Vinyl composition tile
2. Vinyl tile and sheet flooring
3. Linoleum tile and sheet
4. Cork tile and sheet flooring
5. Rubber tile and sheet flooring
6. Polymeric poured seamless flooring
7. Other types of non-textile synthetic flooring

**RE-USE.** The use, in the same form as it was produced, of a material which might otherwise be discarded

**SELF-VERIFICATION.** Verification by the applicant or a qualified green building professional that the project has met the standards as indicated for the project type set forth in this code.

## **SOLID WASTE.**

(a) All putrescible and nonputrescible solid, semisolid and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, dewatered, treated or chemically fixed sewage sludge which is not hazardous waste, manure, vegetable or animal solid and semisolid wastes, and other discarded solid and semisolid wastes.

(b) “Solid waste” does not include any of the following wastes:

- (1) Hazardous waste, as defined in *Public Resources Code* Section 40141.
- (2) Radioactive waste regulated pursuant to the Radiation Control Law (Chapter 8, commencing with Section 114960, of Part 9 of Division 104 of the *Health and Safety Code*).
- (3) Medical waste regulated pursuant to the Medical Waste Management Act (Part 14 commencing with Section 117600) of Division 104 of the *Health and Safety Code*). Untreated medical waste shall not be disposed of in a solid waste landfill, as defined in *Public Resources Code* Section 40195.1. Medical waste that has been treated and deemed to be solid waste shall be regulated pursuant to this division.

**SQUARE FEET (GROSS).** The gross square footage of a structure includes all floor area enclosed within the walls of the structure (measured from the outside perimeter of the wall).

**TENANT IMPROVEMENTS.** Any owner or authorized agent who intends to enlarge, alter, or change the occupancy of a building or structure, or to erect, enlarge, alter, or convert any electrical, gas, mechanical or plumbing system, the installation of which is regulated by the California Building Code, or

to cause any such work to be done, shall obtain the required permit and must comply with the requirements included in this code.

**VAPOR BARRIER.** Material that has a permeance of one perm or less and that provides resistance to the transmission of water vapor.

**ZONING PERMIT.** Any discretionary permit approval from the planning division that includes conditions of approval.

## **MOUNTAIN VIEW GREEN BUILDING CODE – MATRIX ADOPTION TABLE**

### **CHAPTER 3 – GREEN BUILDING**

Adopting agency	BSC	SFM	HCD			DSA		OSHPO				CSA	DPH	AGR	DWR	CEC	CA	SL	SLC
			1	2	1-AC	AC	SS	1	2	3	4								
Adopt entire CA chapter																			
Adopt entire chapter as amended (amended sections listed below)																			
Adopt only those sections that are listed below	X		X				X	X	X		X								
Chapter/Section																			
301	X		X				X	X	X		X								
302	X		X				X	X	X		X								
303	X		X				X	X	X		X								
304	X		X					X	X		X								
305								X											
306							X												

### **CHAPTER 3 GREEN BUILDING**

#### **SECTION 301 GENERAL**

**301.1 Scope.** Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.

#### **SECTION 302 MIXED OCCUPANCY BUILDINGS**

**302.1 Mixed occupancy buildings.** In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.

#### **SECTION 303 PHASED PROJECTS**

**303.1 Phased projects.** For shell buildings and others constructed for future tenant improvements, only those code measures relevant to the building components and systems considered to be new construction (or newly constructed) shall apply.

**303.1.1 Tenant improvements.** The provisions of this code shall apply **to the applicable** tenant or occupant improvements to a project.

#### **SECTION 304 VOLUNTARY TIERS**

**304.1 Purpose.** Voluntary tiers are intended to further encourage building practices that improve public health, safety and general welfare by promoting the use of building concepts which minimize the building's impact on the environment and promote a more sustainable design.

**304.1.1 Tiers.** The provisions of Appendices A4 and A5 outline means of achieving enhanced construction levels by incorporating additional measures. Buildings complying with tiers specified for

each occupancy contain additional prerequisite and elective green building measures necessary to meet the threshold of each tier.

[BSC] Where there are practical difficulties involved in complying with the threshold levels of a tier, the enforcing agency may grant modifications for individual cases. The enforcing agency shall first find that a special individual reason makes the strict letter of the tier impractical and that modification is in conformance with the intent and purpose of the measure. The details of any action granting modification shall be recorded and entered in the files of the enforcing agency.

## **SECTION 305**

### **CALGREEN TIER 1 AND CALGREEN TIER 2**

**305.1** *CALGreen* Tier 1 and *CALGreen* Tier 2 buildings contain voluntary green building measures necessary to meet the threshold of each level.

**305.1.1** *CALGreen* Tier 1. To achieve *CALGreen* Tier 1, buildings must comply with the latest edition of “Savings By Design, Healthcare Modeling Procedures” found online at <http://www.energysoft.com/ep/2007SBDHProcedures.pdf>.

**305.1.2** *CALGreen* Tier 2. To achieve *CALGreen* Tier 2, buildings must exceed the latest edition of “Savings By Design, Healthcare Modeling Procedures” by a minimum of 15 percent.

## **SECTION 306**

### **VOLUNTARY MEASURES**

**306.1 Purpose.** Voluntary measures are intended to further encourage building practices that improve public health, safety and general welfare by promoting the use of building concepts which minimize the building’s impact on the environment, promote a more sustainable design and high-performance educational facilities.

**306.1.1** The provisions of Appendix A5 outline means of achieving enhanced construction levels by incorporating additional measures.

## **MOUNTAIN VIEW GREEN BUILDING** CODE – MATRIX ADOPTION TABLE

### **CHAPTER 4 – RESIDENTIAL MANDATORY MEASURES**

Adopting agency	BSC	SFM	HCD			DSA		OSHDP				CSA	DPH	AGR	DWR	CEC	CA	SL	SLC
			1	2	1-AC	AC	SS	1	2	3	4								
Adopt entire CA chapter			X																
Adopt entire chapter as amended (amended sections listed below)																			
Adopt only those sections that are listed below																			
Chapter/Section																			

### **CHAPTER 4 RESIDENTIAL MANDATORY MEASURES**

#### *Division 4.1 – PLANNING AND DESIGN*

#### **SECTION 4.101 GENERAL**

**4.101.1 Purpose.** The provisions of this division outline planning, design and development methods that include environmentally responsible site selection, building design, building siting and development to protect, restore and enhance the environmental quality of the site and respect the integrity of adjacent properties.

#### **SECTION 4.102 DEFINITIONS**

**4.102.1 Definitions.** The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

**FRENCH DRAIN.** A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar pervious material used to collect or channel drainage or runoff water.

**WATTLES.** Wattles are used to reduce sediment in runoff. Wattles are often constructed of natural plant materials such as hay, straw or similar material shaped in the form of tubes and placed on a downflow slope. Wattles are also used for perimeter and inlet controls.

#### **SECTION 4.103 SITE SELECTION (Reserved)**

#### **SECTION 4.104 SITE PRESERVATION (Reserved)**

#### **SECTION 4.105 DECONSTRUCTION AND REUSE OF EXISTING STRUCTURES (Reserved)**

#### **SECTION 4.106 SITE DEVELOPMENT**



**4.106.1 General.** Preservation and use of available natural resources shall be accomplished through evaluation and careful planning to minimize negative effects on the site and adjacent areas. Preservation of slopes, management of storm water drainage and erosion controls shall comply with this section.

**4.106.2 Storm water drainage and retention during construction.** Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall manage storm water drainage during construction. In order to manage storm water drainage during construction, one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site.

1. Retention basins of sufficient size shall be utilized to retain storm water on the site.
2. Where storm water is conveyed to a public drainage system, collection point, gutter or similar disposal method, water shall be filtered by use of a barrier system, wattle or other method approved by the enforcing agency.

**3. Storm water pollutant control measures must be installed at construction sites year round, in compliance with Section 35.32.10.1(T) of the Mountain View City Code. The storm water pollutant control measures listed in the ordinance include erosion control, run-on and runoff control, sediment control, active treatment (as appropriate), good site management, and non-storm water management through all phases of construction until the site is fully stabilized by landscaping or the installation of permanent erosion control measures.**

**4.106.3 Surface drainage.** The site shall be planned and developed to keep surface water from entering buildings. Construction plans shall indicate how the site grading or drainage system will manage surface water flows. Examples of methods to manage surface water include, but are not limited to, the following:

1. Swales
2. Water collection and disposal systems
3. French drains
4. Water retention gardens
5. Other water measures which keep surface water away from buildings and aid in groundwater recharge

## CHAPTER 4

# RESIDENTIAL MANDATORY MEASURES

### *Division 4.2 – ENERGY EFFICIENCY*

#### **SECTION 4.201**

#### **GENERAL**

**4.201.1 Scope.** The Department of Housing and Community Development does not regulate mandatory energy efficiency standards in residential buildings. For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory building standards.

**Note:** It is the intent of this code to encourage buildings to achieve exemplary performance in the area of energy efficiency. For the purposes of energy efficiency standards, the California Energy Commission believes specifically, a green building should achieve at least a 15 percent reduction in energy usage when compared to the State’s mandatory energy efficiency standards. The Department of Housing and Community Development’s mandatory green building standards for residential buildings do not require compliance with levels of minimum energy efficiency beyond those required by the California Energy Commission.

## CHAPTER 4

# RESIDENTIAL MANDATORY MEASURES

### *Division 4.3 – WATER EFFICIENCY AND CONSERVATION*

#### **SECTION 4.301 GENERAL**

**4.301.1 Scope.** The provisions of this chapter shall establish the means of conserving water used indoors, outdoors and in wastewater conveyance.

#### **SECTION 4.302 DEFINITIONS**

**4.302.1 Definitions.** The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

#### **SECTION 4.303 INDOOR WATER USE**

**4.303.1 Twenty percent savings.** A schedule of plumbing fixtures and fixture fittings that will reduce the overall use of potable water within the building by at least 20 percent shall be provided. The reduction shall be based on the maximum allowable water use per plumbing fixture and fitting as required by the *California Building Standards Code*. The 20 percent reduction in potable water use shall be demonstrated by one of the following methods:

1. Each plumbing fixture and fitting shall meet reduced flow rates specified in Table 4.303.2; or
2. A calculation demonstrating a 20 percent reduction in the building “water use” baseline as established in Table 4.303.1 shall be provided. For low-rise residential occupancies, the calculation shall be limited to the following plumbing fixture and fitting types: water closets, urinals, lavatory faucets and showerheads.

**4.303.2 Multiple showerheads serving one shower.** When single shower fixtures are served by more than one showerhead, the combined flow rate of all the showerheads shall not exceed the maximum flow rates specified in the 20 percent reduction column contained in Table 4.303.2 or the shower shall be designed to only allow one showerhead to be in operation at a time.

**Exception:** The maximum flow rate for showerheads when using the calculation method specified in Section 4.303.1, Item 2, is 2.5 gpm @ 80 psi.

**4.303.3 Plumbing fixtures and fittings.** Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall meet the standards referenced in Table 4.303.3.

**TABLE 4.303.1**

**WATER USE  
BASELINE<sup>1</sup>**

FIXTURE TYPE	FLOW RATE <sup>2</sup>	DURATION	DAILY USES	OCCUPANTS <sup>3</sup>
Showerheads, residential	2.5 gpm @ 80 psi	8 min.	1	
Lavatory faucets, residential	2.2 gpm @ 60 psi	.25 min.	3	
Kitchen faucets	2.2 gpm @ 60 psi	4 min.	1	
Replacement aerators	2.2 gpm @ 60 psi			
Gravity tank-type water closets	1.6 gallons/flush	1 flush	1 male <sup>4</sup> 3 female	
Flushometer tank water closets	1.6 gallons/flush	1 flush	1 male <sup>4</sup> 3 female	
Flushometer valve water closets	1.6 gallons/flush	1 flush	1 male <sup>4</sup> 3 female	
Electromechanical hydraulic water closets	1.6 gallons/flush	1 flush	1 male <sup>4</sup> 3 female	
Urinals	1.0 gallon/flush	1 flush	2 male	

Fixture "Water Use" = Flow rate · Duration · Occupants · Daily uses

1. Use Worksheet WS-1 to calculate baseline water use.

2. The flowrate is from the CEC Appliance Efficiency Standards, Title 20, *California Code of Regulations*; where a conflict occurs, the CEC standards shall apply.

3. For low-rise residential occupancies, the number of occupants shall be based on two persons for the first bedroom, plus one additional person for each additional bedroom.

4. The daily use number shall be increased to three if urinals are not installed in the room.

**TABLE 4.303.2  
FIXTURE FLOW  
RATES**

FIXTURE TYPE	FLOW RATE	MAXIMUM FLOW RATE AT ≥ 20 percent REDUCTION
Showerheads	2.5 gpm @ 80 psi	2 gpm @ 80 psi
Lavatory faucets, residential	2.2 gpm @ 60 psi	1.5 gpm @ 60 psi <sup>2</sup>
Kitchen faucets	2.2 gpm @ 60 psi	1.8 gpm @ 60 psi
Gravity tank-type water closets	1.6 gallons/flush	1.28 gallons/flush <sup>1</sup>
Flushometer tank water closets	1.6 gallons/flush	1.28 gallons/flush <sup>1</sup>
Flushometer valve water closets	1.6 gallons/flush	1.28 gallons/flush <sup>1</sup>
Electromechanical hydraulic water closets	1.6 gallons/flush	1.28 gallons/flush <sup>1</sup>
Urinals	1.0 gallon/flush	.5 gallon/flush

1. Includes single and dual flush water closets with an effective flush of 1.28 gallons or less.

Single flush toilets—The effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is the average flush volume when tested in accordance with ASME A112.19.233.2.

Dual flush toilets—The effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is defined as the composite, average flush volume of two reduced flushes and one full flush. Flush volumes will be tested in accordance with ASME A112.19.2 and ASME A112.19.14.

2. Lavatory faucets shall not have a flow rate less than 0.8 gpm at 20 psi.

**TABLE 4.303.3**

**STANDARDS FOR PLUMBING FIXTURES AND FIXTURE FITTINGS**

REQUIRED STANDARDS	
Water closets (toilets)—flushometer valve-type single flush, maximum flush volume	ASME A 112.19.2/CSA B45.1 – 1.28 gal (4.8 L)
Water closets (toilets)—flushometer valve-type dual flush, maximum flush volume	ASME A 112.19.14 and U.S. EPA WaterSense Tank-Type High-Efficiency Toilet Specification – 1.28 gal (4.8 L).
Water closets (toilets)—tank type	U.S. EPA WaterSense Tank-Type High-Efficiency Toilet Specification
Urinals, maximum flush volume	ASME A 112.19.2/CSA B45.1 – 0.5 gal (1.9 L)
Urinals, nonwater urinals	ASME A 112.19.19 (vitreous china) ANSI Z124.9-2004 or IAPMO Z124.9 (plastic)
Public lavatory faucets: Maximum flow rate – 0.5 gpm (1.9 L/min)	ASME A 112.18.1/CSA B125.1
Public metering self-closing faucets: Maximum water use – 0.25 gal (1.0 L) per metering cycle	ASME A 112.18.1/CSA B125.1
Residential bathroom lavatory sink faucets: Maximum flow rate – 1.5 gpm (5.7 L/min)	ASME A 112.18.1/CSA B125.1

**SECTION 4.304  
OUTDOOR WATER USE**

**4.304.1** Compliance with local water efficient landscape ordinance. Projects with landscape areas of 1,000 square feet or greater must comply with the City of Mountain View's Water Conservation in Landscaping Regulations, pursuant to Chapter 36, Article XII-A, Division A36.32, of the City Code. Projects with landscape areas of less than 1,000 square feet must comply with the requirements of Section 4.304.2 of this code.

1. Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' needs as weather conditions change.
2. Weather- and soil moisture based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s).

**Note:** More information regarding irrigation controller function and specifications is available from the Irrigation Association.

**SECTION 4.305  
WATER REUSE SYSTEMS  
(Reserved)**

## CHAPTER 4 RESIDENTIAL MANDATORY MEASURES

### *Division 4.4 – MATERIAL CONSERVATION AND RESOURCE EFFICIENCY*

#### **SECTION 4.401 GENERAL**

**4.401.1 Scope.** The provisions of this chapter shall outline means of achieving material conservation and resource efficiency through protection of buildings from exterior moisture; construction waste diversion; employment of techniques to reduce pollution through recycling of materials; and building commissioning or testing, adjusting and balancing.

#### **SECTION 4.402 DEFINITIONS**

**4.402.1 Definitions.** The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

#### **SECTION 4.403 FOUNDATION SYSTEMS (Reserved)**

#### **SECTION 4.404 EFFICIENT FRAMING TECHNIQUES (Reserved)**

#### **SECTION 4.405 MATERIAL SOURCES (Reserved)**

#### **SECTION 4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE**

**4.406.1 Joints and openings.** Openings in the building envelope separating conditioned space from unconditioned space needed to accommodate gas, plumbing, electrical lines and other necessary penetrations must be sealed in compliance with the *California Energy Code*.

**Exception:** Annular spaces around pipes, electric cables, conduits or other openings in plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.

#### **SECTION 4.407 WATER RESISTANCE AND MOISTURE MANAGEMENT (Reserved)**

#### **SECTION 4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING**

**4.408.1 Compliance with local construction & demolition debris diversion program.** Projects adding or constructing 5,000 square feet or more of new floor area must comply with the City of Mountain View's Construction and Demolition Debris Ordinance, pursuant to Chapter 16, Article III of the City Code. Projects adding or constructing 5,000 square feet or less of new floor area, if subject to this code, must comply with the requirements of Section 4.408 of this code.

**4.408.1.1 Construction waste reduction of at least 50 percent.** Recycle and/or salvage for reuse a minimum of 50 percent of the nonhazardous construction and demolition debris, or meet a local construction and demolition waste management ordinance, whichever is more stringent.

**Exceptions:**

1. Excavated soil and land-clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite.

**4.408.2 Construction waste management plan.** Where a local jurisdiction does not have a construction and demolition waste management ordinance, a construction waste management plan shall be submitted for approval to the enforcing agency that:

1. Identifies the materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale.
2. Specifies if materials will be sorted on-site or mixed for transportation to a diversion facility.
3. Identifies the diversion facility where the material collected will be taken.
4. Identifies construction methods employed to reduce the amount of waste generated.
5. Specifies that the amount of materials diverted shall be calculated by weight or volume, but not by both.

**4.408.2.1 Documentation.** Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 4.408.2, Items 1 through 5. The waste management plan shall be updated as necessary and shall be accessible during construction for examination by the enforcing agency.

**4.408.2.2 Isolated jobsites.** The enforcing agency may make exceptions to the requirements of this section when jobsites are located in areas beyond the haul boundaries of the diversion facility.

**4.408.3 Excavated soil and land clearing debris.** One hundred percent (100%) of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed.

**SECTION 4.409  
LIFE CYCLE ASSESSMENT  
(Reserved)**

**SECTION 4.410  
BUILDING MAINTENANCE AND OPERATION**

**4.410.1 Operation and maintenance manual.** At the time of final inspection, a manual, compact disc, web-based reference or other media acceptable to the enforcing agency which includes all of the following shall be placed in the building:

1. Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure.
2. Operation and maintenance instructions for the following:
  - a. Equipment and appliances, including water-saving devices and systems, HVAC systems, water-heating systems and other major appliances and equipment.
  - b. Roof and yard drainage, including gutters and downspouts.
  - c. Space conditioning systems, including condensers and air filters.
  - d. Landscape irrigation systems.
  - e. Water reuse systems.



3. Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations.
4. Public transportation and/or carpool options available in the area.
5. Educational material on the positive impacts of an interior relative humidity between 30–60 percent and what methods an occupant may use to maintain the relative humidity level in that range.
6. Information about water-conserving landscape and irrigation design and controllers which conserve water.
7. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation.
8. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.
9. Information about state solar energy and incentive programs available.
10. A copy of all special inspection verifications required by the enforcing agency or this code.

**4.410.2 Recycling by occupants.** Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics and metals.

**4.410.2.1 Sample ordinance.** Space allocation for recycling areas shall comply with Chapter 18, Part 3, Division 30 of the *Public Resources Code*. Chapter 18 is known as the California Solid Waste Reuse and Recycling Access Act of 1991 (Act).

## CHAPTER 4

# RESIDENTIAL MANDATORY MEASURES

### *Division 4.5 – ENVIRONMENTAL QUALITY*

#### **SECTION 4.501 GENERAL**

**4.501.1 Scope.** The provisions of this chapter shall outline means of reducing the quantity of air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of a building's installers, occupants and neighbors.

#### **SECTION 4.502 DEFINITIONS**

**4.502.1 Definitions.** The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

**AGRIFIBER PRODUCTS.** Agrifiber products include wheatboard, strawboard, panel substrates and door cores, not including furniture, fixtures and equipment (FF&E) not considered base building elements.

**COMPOSITE WOOD PRODUCTS.** Composite wood products include hardwood plywood, particleboard and medium density fiberboard. Composite wood products do not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber as specified in "Structural Glued Laminated Timber" (ANSI A190.1-2002) or prefabricated wood I-joists.

**MAXIMUM INCREMENTAL REACTIVITY (MIR).** The maximum change in weight of ozone formed by adding a compound to the "base reactive organic gas (ROG) mixture" per weight of compound added, expressed to hundredths of a gram (g O<sub>3</sub>/g ROC).

**Note:** MIR values for individual compounds and hydrocarbon solvents are specified in CCR, Title 17, Sections 94700 and 94701.

**MOISTURE CONTENT.** The weight of the water in wood expressed in percentage of the weight of the oven-dry wood.

**PRODUCT-WEIGHTED MIR (PWMIR).** The sum of all weighted MIR for all ingredients in a product subject to this article. The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging).

**Note:** PWMIR is calculated according to equations found in CCR, Title 17, Section 94521(a).

**REACTIVE ORGANIC COMPOUND (ROC).** Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere.

**VOC.** Volatile organic compound broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a).

**Note:** Where specific regulations are cited from different agencies such as SCAQMD, ARB, etc., the VOC definition included in that specific regulation is the one that prevails for the specific measure in question.

#### **SECTION 4.503 FIREPLACES**

**4.503.1 General.** Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA Phase II emission limits where applicable.

Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances. **Mountain View City Code Chapter 8, Article I, Division IV shall be referenced for wood-burning devices.**

## **SECTION 4.504 POLLUTANT CONTROL**

**4.504.1 Covering of duct openings and protection of mechanical equipment during construction.** At the time of rough installation or during storage on the construction site and until final startup of the heating and cooling equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to the enforcing agency to reduce the amount of dust or debris which may collect in the system.

**4.504.2 Finish material pollutant control.** Finish materials shall comply with this section.

**4.504.2.1 Adhesives, sealants and caulks.** Adhesives, sealants and caulks used on the project shall meet the requirements of the following standards unless more stringent local or regional air pollution or air quality management district rules apply:

1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers, and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAQMD Rule 1168 VOC limits, as shown in Table 4.504.1 or 4.504.2, as applicable. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products, as specified in Subsection 2 below.
2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than 1 pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of *California Code of Regulations*, Title 17, commencing with Section 94507.

**4.504.2.2 Paints and coatings.** Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Suggested Control Measure, as shown in Table 4.504.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 4.504.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in subsections 4.21, 4.36, and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 4.504.3 shall apply.

**4.504.2.3 Aerosol paints and coatings.** Aerosol paints and coatings shall meet the Product-Weighted MIR Limits for ROC in Section 94522(a)(3) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(c)(2) and (d)(2) of *California Code of Regulations*, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8, Rule 49.

**4.504.2.4 Verification.** Verification of compliance with this section shall be provided at the request of the **City of Mountain View**. Documentation may include, but is not limited to, the following:

1. Manufacturer's product specification.
2. Field verification of on-site product containers.

**4.504.3 Carpet systems.** All carpet installed in the building interior shall meet the testing and product requirements of one of the following:

1. Carpet and Rug Institute's Green Label Plus Program.

2. California Department of Public Health Standard Practice for the testing of VOCs (Specification 01350).
3. NSF/ANSI 140 at the Gold level.
4. Scientific Certifications Systems Indoor Advantage™ Gold.

**TABLE 4.504.1**  
**ADHESIVE VOC LIMIT<sup>1,2</sup>**  
**Less Water and Less Exempt Compounds in Grams per Liter**

ARCHITECTURAL APPLICATIONS	CURRENT VOC LIMIT
Indoor carpet adhesives	50
Carpet pad adhesives	50
Outdoor carpet adhesives	150
Wood flooring adhesive	100
Rubber floor adhesives	60
Subfloor adhesives	50
Ceramic tile adhesives	65
VCT and asphalt tile adhesives	50
Drywall and panel adhesives	50
Cove base adhesives	50
Multipurpose construction adhesives	70
Structural glazing adhesives	100
Single-ply roof membrane adhesives	250
Other adhesives not specifically listed	50
<b>SPECIALTY APPLICATIONS</b>	
PVC welding	510
CPVC welding	490
ABS welding	325
Plastic cement welding	250
Adhesive primer for plastic	550
Contact adhesive	80
Special purpose contact adhesive	250
Structural wood member adhesive	140
Top and trim adhesive	250
<b>SUBSTRATE SPECIFIC APPLICATIONS</b>	
Metal to metal	30
Plastic foams	50
Porous material (except wood)	50
Wood	30
Fiberglass	80

1. If an adhesive is used to bond dissimilar substrates together, the adhesive with the highest VOC content shall be allowed.
2. For additional information regarding methods to measure the VOC content specified in this table, see South Coast Air Quality Management District Rule 1168.

**TABLE 4.504.2**  
**SEALANT VOC LIMIT**  
**Less Water and Less Exempt Compounds in Grams per Liter**

SEALANTS	CURRENT VOC LIMIT
Architectural	250
Marine deck	760
Nonmembrane roof	300
Roadway	250
Single-ply roof membrane	450
Other	420
<b>SEALANT PRIMERS</b>	
Architectural	
Nonporous	250
Porous	775
Modified bituminous	500
Marine deck	760
Other	750

**TABLE 4.504.3**  
**VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS<sup>2, 3</sup>**

**Grams of VOC per Liter of Coating,  
Less Water and Less Exempt Compounds**

COATING CATEGORY	EFFECTIVE 1/1/2010	EFFECTIVE 1/1/2012
Flat coatings	50	
Nonflat coatings	100	
Nonflat-high gloss coatings	150	
<b>Specialty Coatings</b>		
Aluminum roof coatings	400	
Basement specialty coatings	400	
Bituminous roof coatings	50	
Bituminous roof primers	350	
Bond breakers	350	
Concrete curing compounds	350	
Concrete/masonry sealers	100	
Driveway sealers	50	
Dry fog coatings	150	
Faux finishing coatings	350	
Fire resistive coatings	350	
Floor coatings	100	
Form-release compounds	250	
Graphic arts coatings (sign paints)	500	
High temperature coatings	420	
Industrial maintenance coatings	250	
Low solids coatings <sup>1</sup>	120	
Magnetite cement coatings	450	
Mastic texture coatings	100	
Metallic pigmented coatings	500	
Multicolor coatings	250	
Pretreatment wash primers	420	
Primers, sealers, and undercoats	100	
Reactive penetrating sealers	350	
Recycled coatings	250	
Roof coatings	50	
Rust preventative coatings	400	250
Shellacs		
Clear	750	
Opaque	550	
Specialty primers, sealers and undercoats	350	100
Stains	250	
Stone consolidants	450	
Swimming pool coatings	340	
Traffic marking coatings	100	
Tub and tile refinish coatings	420	
Waterproofing membranes	250	
Wood coatings	275	
Wood preservatives	350	
Zinc-rich primers	340	

1. Grams of VOC per liter of coating, including water and including exempt compounds.
2. The specified limits remain in effect unless revised limits are listed in subsequent columns in the table.
3. Values in this table are derived from those specified by the California Air Resources Board, Architectural Coatings Suggested Control Measure, February 1, 2008. More information is available from the Air Resources Board.

**4.504.3.1 Carpet cushion.** All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute Green Label program.

**4.504.3.2 Carpet adhesive.** All carpet adhesive shall meet the requirements of Table 4.504.1.

**4.504.4 Resilient flooring systems.** Where resilient flooring is installed, at least 50 percent of floor area receiving resilient flooring shall comply with the VOC emission limits defined in the Collaborative for High Performance Schools (CHPS) Low-emitting Materials List or certified under the Resilient Floor Covering Institute (RFCI) FloorScore program.

**4.504.5 Composite wood products.** Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.), by or before the dates specified in those sections, as shown in Table 4.504.5.

**4.504.5.1 Documentation.** Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:

1. Product certifications and specifications
2. Chain of custody certifications
3. Other methods acceptable to the enforcing agency

**TABLE 4.504.5  
FORMALDEHYDE LIMITS<sup>1</sup>  
Maximum Formaldehyde Emissions in Parts per Million**

PRODUCT	CURRENT LIMIT	JANUARY 1, 2012	JULY 1, 2012
Hardwood plywood veneer core	0.05		
Hardwood plywood composite core	0.08		0.05
Particleboard	0.09		
Medium density fiberboard	0.11		
Thin medium density fiberboard <sup>2</sup>	0.21	0.13	

1. Values in this table are derived from those specified by the California Air Resources Board, Air Toxics Control Measure for Composite Wood as tested in accordance with ASTM E 1333-96(2002). For additional information, see *California Code of Regulations*, Title 17, Sections 93120 through 93120.12.

2. Thin medium density fiberboard has a maximum thickness of 8 millimeters.

## **SECTION 4.505 INTERIOR MOISTURE CONTROL**

**4.505.1 General.** Buildings shall meet or exceed the provisions of the *California Building Standards Code*.

**4.505.2 Concrete slab foundations.** Concrete slab foundations required to have a vapor retarder by *California Building Code*, CCR, Title 24, Part 2, Chapter 19, shall also comply with this section.

**4.505.2.1 Capillary break.** A capillary break shall be installed in compliance with at least one of the following:

1. A 4-inch (101.6 mm) thick base of 1/2 inch (12.7 mm) or larger clean aggregate shall be provided with a vapor barrier in direct contact with concrete and a concrete mix design, which will address bleeding, shrinkage, and curling, shall be used. For additional information, see American Concrete Institute, ACI 302.2R-06.
2. Other equivalent methods approved by the enforcing agency.
3. A slab design specified by a licensed design professional.

**4.505.3 Moisture content of building materials.** Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19 percent moisture content. Moisture content shall be verified in compliance with the following:

1. Moisture content shall be determined with either a probe-type or contact-type moisture meter.
2. Moisture readings shall be taken at a point 2 feet (610 mm) to 4 feet (1219 mm) from the grade stamped end of each piece to be verified.
3. At least three random moisture readings shall be performed on wall and floor framing with documentation acceptable to the enforcing agency provided at the time of approval to enclose the wall and floor framing. Insulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Wet-applied insulation products shall follow the manufacturers' drying recommendations prior to enclosure.

## **SECTION 4.506**

## INDOOR AIR QUALITY AND EXHAUST

**4.506.1 Bathroom exhaust fans.** Mechanical exhaust fans which exhaust directly from bathrooms shall comply with the following:

1. Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building.
2. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a Humidistat which shall be readily accessible.

Humidistat controls shall be capable of adjustment between a relative humidity range of 50 to 80 percent.

**Note:** For the purposes of this section, a bathroom is a room which contains a bathtub, shower or tub/shower combination.

## SECTION 4.507 ENVIRONMENTAL COMFORT

**4.507.1 Openings.** Whole house exhaust fans shall have insulated louvers or covers which close when the fan is off. Covers or louvers shall have a minimum insulation value of R-4.2.

**4.507.2 Heating and air-conditioning system design.** Heating and air-conditioning systems shall be sized, designed and have their equipment selected using the following methods:

1. The heat loss and heat gain is established according to ACCA Manual J, ASHRAE handbooks or other equivalent design software or methods.
2. Duct systems are sized according to ACCA 29-D Manual D, ASHRAE handbooks or other equivalent design software or methods.
3. Select heating and cooling equipment according to ACCA 36-S Manual S or other equivalent design software or methods.

**Exception:** Use of alternate design temperatures necessary to ensure the systems function are acceptable.

## SECTION 4.508 OUTDOOR AIR QUALITY (Reserved)



**MOUNTAIN VIEW GREEN BUILDING CODE – MATRIX ADOPTION TABLE**  
**CHAPTER 5 – NONRESIDENTIAL MANDATORY MEASURES**  
**DIVISION 1 – PLANNING AND DESIGN**

Adopting agency	BSC	SPM	HCD			DSA		OSHDP				CSA	DPH	AGR	DWR	CEC	CA	SL	SLC
			1	2	1-AC	AC	SS	1	2	3	4								
Adopt entire CA chapter	X																		
Adopt entire chapter as amended (amended sections listed below)																			
Adopt only those sections that are listed below							X												
Chapter/Section																			
5.101							X												
5.102 Definitions							X												
5.106.8							X												
5.106.10							X												

## CHAPTER 5 NONRESIDENTIAL MANDATORY MEASURES

### *Division 5.1 – PLANNING AND DESIGN*

#### **SECTION 5.101 GENERAL**

**5.101 Purpose.** The provisions of this chapter outline planning, design and development methods that include environmentally responsible site selection, building design, building siting and development to protect, restore and enhance the environmental quality of the site and respect the integrity of adjacent properties.

#### **SECTION 5.102 DEFINITIONS**

**5.102 Definitions.** The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

**CUTOFF LUMINAIRES.** Luminaires whose light distribution is such that the candela per 1000 lamp lumens does not numerically exceed 25 (2.5 percent) at an angle of 90° above nadir, and 100 (10 percent) at a vertical angle of 80° above nadir. This applies to all lateral angles around the luminaire.

**LOW-EMITTING AND FUEL EFFICIENT VEHICLES.** Eligible vehicles are limited to the following:

1. Zero emission vehicle (ZEV), including neighborhood electric vehicles (NEV), partial zero emission vehicle (PZEV), advanced technology PZEV (AT ZEV) or CNG fueled (Original equipment manufacturer only) regulated under Health and Safety Code section 43800 and CCR, Title 13, Sections 1961 and 1962.
2. High-efficiency vehicles, regulated by U.S. EPA, bearing High-Occupancy Vehicle (HOV) car pool lane stickers issued by the Department of Motor Vehicles.

**NEIGHBORHOOD ELECTRIC VEHICLE (NEV).** A motor vehicle that meets the definition of “low-speed vehicle” either in Section 385.5 of the Vehicle Code or in 49 CFR571.500 (as it existed on July 1, 2000), and is certified to zero-emission vehicle standards.

**PZEV.** Any vehicle certified by the California Air Resources Board as a Partial Credit Zero Emission Vehicle.

**TENANT-OCCUPANTS.** Building occupants who inhabit a building during its normal hours of operation as permanent occupants, such as employees, as distinguished from customers and other transient visitors.

**VANPOOL VEHICLE.** Eligible vehicles are limited to any motor vehicle, other than a motortruck or truck tractor, designed for carrying more than 10 but not more than 15 persons including the driver, which is maintained and used primarily for the nonprofit work-related transportation of adults for the purposes of ridesharing.

**Note:** Source: Vehicle Code, Division 1, Section 668

**ZEV.** Any vehicle certified to zero-emission standards.

### **SECTION 5.103 SITE SELECTION (Reserved)**

### **SECTION 5.104 SITE PRESERVATION (Reserved)**

### **SECTION 5.105 DECONSTRUCTION AND REUSE OF EXISTING STRUCTURES (Reserved)**

### **SECTION 5.106 SITE DEVELOPMENT**

**5.106.1 Storm water sediment and erosion control plan.** For newly constructed projects of less than one acre, develop and implement a storm water sediment and erosion control plan that has been designed specific to its site. The storm water sediment and erosion control plan shall be developed to provide equivalent protection to projects regulated by the State Storm water NPDES Construction Permit (greater than 1 acre of disturbed land), and Section 35.32.10.1(T) of the Mountain View City Code. The storm water pollutant control measures that shall be included in the Plan include erosion control, run-on and runoff control, sediment control, astice treatment (as appropriate), good site management, and non-storm water management through all phases of construction until it is fully stabilized by landscaping or the installation of permanent erosion control measures.

**Note:** No state permit is required, but construction best management practices (BMPs) as approved by the City of Mountain View shall be followed. BMPs include but are not limited to the following:

- 1. Erosion and sediment control BMPs:**
  - a. Scheduling construction activity
  - b. Preservation of natural features, vegetation and soil
  - c. Drainage swales or lined ditches to control stormwater flow
  - d. Mulching or hydroseeding to stabilize soils
  - e. Erosion control covers to protect slopes
  - f. Protection of storm drain inlets (gravel bags or catch basin inserts)
  - g. Perimeter sediment control (perimeter silt fence, fiber rolls)
  - h. Sediment trap or sediment basin to retain sediment on site
  - i. Stabilized construction exits
  - j. Wind erosion control
- 2. Housekeeping BMPs:**
  - a. Material handling and waste management
  - b. Building materials stockpile management
  - c. Management of washout areas (concrete, paints, stucco, etc)

- d. Control of vehicle/equipment fueling to contractor's staging area
- e. Vehicle and equipment cleaning performed off site
- f. Spill prevention and control

**5.106.4 Bicycle parking and changing rooms.** Comply with Sections 5.106.4.1 and 5.106.4.2; or meet local ordinance or the University of California Policy on Sustainable Practices, whichever is stricter.

**5.106.4.1 Short-Term bicycle parking.** If the project is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 100 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack.

**5.106.4.2 Long-Term bicycle parking.** For buildings with over 10 tenant-occupants, provide secure bicycle parking for 5 percent of motorized vehicle parking capacity, with a minimum of one space. Acceptable parking facilities shall be convenient from the street and may include:

1. Covered, lockable enclosures with permanently anchored racks for bicycles;
2. Lockable bicycle rooms with permanently anchored racks; and
3. Lockable, permanently anchored bicycle lockers.

**Note:** Additional information on recommended bicycle accommodations may be obtained from Sacramento Area Bicycle Advocates.

**5.106.5.2 Designated parking.** Provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as follows:

**TABLE 5.106.5.2**

TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED SPACES
0–9	0
10–25	1
26–50	3
51–75	6
76–100	8
101–150	11
151–200	16
201 and over	At least 8 percent of total

**5.106.5.2.1 Parking stall marking.** Paint, in the paint used for stall striping, the following characters such that the lower edge of the last word aligns with the end of the stall striping and is visible beneath a parked vehicle: CLEAN AIR VEHICLE

**5.106.8 Light pollution reduction.** Comply with lighting power requirements in the *California Energy Code*, CCR, Part 6, and design interior and exterior lighting such that zero direct-beam illumination leaves the building site. Meet or exceed exterior light levels and uniformity ratios for lighting zones 1–4 as defined in Chapter 10 of the *California Administrative Code*, CCR, Part 1, using the following strategies:

1. Shield all exterior luminaires or provide cutoff luminaires per Section 132 (b) of the *California Energy Code*.
2. Contain interior lighting within each source.
3. Allow no more than .01 horizontal lumen footcandles to escape 15 feet beyond the site boundary.
4. Automatically control exterior lighting dusk to dawn to turn off or lower light levels during inactive periods.

**Exceptions:**

1. Part 2, Chapter 12, Section 1205.6 for campus lighting requirements for parking facilities and walkways.

2. Emergency lighting and lighting required for nighttime security.

**5.106.10 Grading and paving.** The site shall be planned and developed to keep surface water from entering buildings. Construction plans shall indicate how site grading or a drainage system will manage all surface water flows.

**MOUNTAIN VIEW GREEN BUILDING CODE – MATRIX ADOPTION TABLE**  
**CHAPTER 5 – NONRESIDENTIAL MANDATORY MEASURES**  
**DIVISION 5.2 – ENERGY EFFICIENCY**

Adopting agency	BSC	SFM	HCD			DSA		CSHPD				CSA	DPH	AGR	DWR	CEC	CA	SL	SLC
			1	2	1-AC	AC	SS	1	2	3	4								
Adopt entire CA chapter	X						X												
Adopt entire chapter as amended (amended sections listed below)																			
Adopt only those sections that are listed below																			
Chapter/Section																			

## CHAPTER 5 NONRESIDENTIAL MANDATORY MEASURES

### *Division 5.2 – ENERGY EFFICIENCY*

#### **SECTION 5.201 GENERAL**

**5.201.1 Scope.** For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory building standards.

**Note:** It is the intent of this code to encourage buildings to achieve exemplary performance in the area of energy efficiency. For the purposes of energy efficiency standards, the California Energy Commission believes specifically, a green building should achieve at least a 15 percent reduction in energy usage when compared to the State's mandatory energy efficiency standards.

**MOUNTAIN VIEW GREEN BUILDING CODE – MATRIX ADOPTION TABLE**  
**CHAPTER 5 – NONRESIDENTIAL MANDATORY MEASURES**  
**DIVISION 5.3 – WATER EFFICIENCY AND CONSERVATION**

Adopting agency	BSC	SFM	HCD			DSA		OSHDPD				CSA	DPH	AGR	DWR	CEC	CA	SL	SLC
			1	2	1-AC	AC	SS	1	2	3	4								
Adopt entire CA chapter	X																		
Adopt entire chapter as amended (amended sections listed below)																			
Adopt only those sections that are listed below							X												
Chapter/Section																			
5.301.1							X												
5.302.1 Definitions							X												
5.303.2							X												
Table 5.303.2.2							X												
Table 5.303.2.3							X												
5.303.4, Item 1 only							X												
5.303.6							X												
Table 5.303.6							X												

## CHAPTER 5 NONRESIDENTIAL MANDATORY MEASURES

### *Division 5.3 – WATER EFFICIENCY AND CONSERVATION*

#### **SECTION 5.301 GENERAL**

**5.301.1 Scope.** The provisions of this chapter shall establish the means of conserving water used indoors, outdoors and in wastewater conveyance.

#### **SECTION 5.302 DEFINITIONS**

**5.302.1 Definitions.** The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

**GRAYWATER.** Untreated household waste which has not come into contact with toilet waste. Graywater includes used water from bathtubs, showers, bathroom wash basins and water from clothes washing machines and laundry tubs. It shall not include waste water from kitchen sinks, dishwashers or laundry water from soiled diapers.

**MODEL WATER EFFICIENT LANDSCAPE ORDINANCE.** The California ordinance regulating landscape design, installation and maintenance practices that will ensure commercial, multifamily and other developer installed landscapes greater than 2500 square feet meet an irrigation water budget developed based on landscaped area and climatological parameters.

**NEW WATER SERVICE.** A site that has not been connected to the City's water distribution system as determined by the public works department.

**POTABLE WATER.** Water that is drinkable and meets the U.S. Environmental Protection Agency (EPA) Drinking Water Standards. See definition in the *California Plumbing Code*, Part 5.

**RECYCLED WATER.** Water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur [*Water Code* Section 13050 (n)]. Simply put, recycled water is water treated to remove waste matter attaining a quality that is suitable to use the water again.

**SUBMETER.** A meter installed subordinate to a site meter. Usually used to measure water intended for one purpose, such as landscape irrigation. For the purposes of this section, a dedicated meter may be considered a submeter.

**WATER BUDGET.** Estimated total landscape irrigation water use shall not exceed the maximum applied water allowance calculated in accordance with the Department of Water Resources Model Efficient Landscape Ordinance (MLO).

## **SECTION 5.303 INDOOR WATER USE**

**5.303.1 Meters.** Separate meters or metering devices shall be installed for the uses described in Sections 503.1.1 and 503.1.2.

**5.303.1.1 Buildings in excess of 50,000 square feet.** Separate submeters shall be installed as follows:

1. For each individual leased, rented or other tenant space within the building projected to consume more than 100 gal/day.
2. For spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop projected to consume more than 100 gal/day.

**5.303.1.2 Excess consumption.** Any building within a project or space within a building that is projected to consume more than 1,000 gal/day.

**5.303.2 Twenty percent savings.** A schedule of plumbing fixtures and fixture fittings that will reduce the overall use of potable water within the building by 20 percent shall be provided. The reduction shall be based on the maximum allowable water use per plumbing fixture and fittings as required by the *California Building Standards Code*. The 20 percent reduction in potable water use shall be demonstrated by one of the following methods:

1. Each plumbing fixture and fitting shall meet the 20 percent reduced flow rate specified in Table 5.303.2.3, or
2. A calculation demonstrating a 20 percent reduction in the building “water use baseline” as established in Table 5.303.2.2 shall be provided.

**5.303.2.1 Multiple showerheads serving one shower.** When single shower fixtures are served by more than one showerhead, the combined flow rate of all the showerheads shall not exceed the maximum flow rates specified in the 20 percent reduction column contained in Table 5.303.2.3 or the shower shall be designed to only allow one showerhead to be in operation at a time.

**Exception:** The maximum flow rate for shower heads when using the calculation method specified in Section 5.303.2, Item 2 is 2.5 gpm @ 80 psi.

**5.303.4 Wastewater reduction.** Each building shall reduce by 20 percent wastewater by one of the following methods:

1. [DSA-SS] The installation of water-conserving fixtures (water closets, urinals) meeting the criteria established in sections 5.303.2 or 5.303.3 or
2. Utilizing nonpotable water systems [captured rainwater, graywater, and municipally treated wastewater (recycled water) complying with the current edition of the California Plumbing Code or other methods described in Section A5.304].

**5.303.6 Plumbing fixtures and fittings.** Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall meet the standards referenced in Table 5.303.6.

**TABLE 5.303.2.2  
INDOOR WATER USE  
BASELINE<sup>4</sup>**

FIXTURE TYPE	FLOW RATE <sup>2</sup>	DURATION	DAILY USES	OCCUPANTS <sup>3</sup>
Showerheads	2.5 gpm @ 80 psi	8 min.	1	X
Lavatory faucets nonresidential	0.5 gpm @ 60 psi	.25 min.	3	X
Kitchen faucets	2.2 gpm @ 60 psi	4 min.	1	X
Replacement aerators	2.2 gpm @ 60 psi			X
Wash fountains	2.2 [rim space (in.)/20 gpm @ 60 psi]			X
Metering faucets	0.25 gallons/cycle	.25 min.	3	X
Metering faucets for wash fountains	.25 [rim space (in.)/20 gpm @ 60 psi]	.25 min.		X
Gravity tank type water closets	1.6 gallons/flush	1 flush	1 male <sup>1</sup> 3 female	X
Flushometer tank water closets	1.6 gallons/flush	1 flush	1 male <sup>1</sup> 3 female	X
Flushometer valve water closets	1.6 gallons/flush	1 flush	1 male <sup>1</sup> 3 female	X
Electromechanical hydraulic water closets	1.6 gallons/flush	1 flush	1 male <sup>1</sup> 3 female	X
Urinals	1.0 gallons/flush	1 flush	2 male	X

Fixture "Water Use" = Flow rate · Duration · Occupants · Daily uses

1. The daily use number shall be increased to three if urinals are not installed in the room.
2. The flowrate is from the CEC Appliance Efficiency Standards, Title 20, *California Code of Regulations*; where a conflict occurs, the CEC standards shall apply.
3. Refer to Table A, Chapter 4, *California Plumbing Code*, for occupant load factors.
4. Use Worksheet WS-1 to calculate base line water use.

**TABLE 5.303.2.3  
FIXTURE FLOW  
RATES**

FIXTURE TYPE	FLOW RATE	MAXIMUM FLOW RATE AT 20 percent REDUCTION
Showerheads	2.5 gpm @ 80 psi	2 gpm @ 80 psi
Lavatory faucets—nonresidential	0.5 gpm @ 60 psi	0.4 gpm @ 60 psi
Kitchen faucets	2.2 gpm @ 60 psi	1.8 gpm @ 60 psi
Wash fountains	2.2 [rim space (in.)/20 gpm @ 60 psi]	1.8 [rim space (in.)/20 gpm @ 60 psi]
Metering faucets	0.25 gallons/cycle	0.2 gallons/cycle
Metering faucets for wash fountains	.25 [rim space (in.)/20 gpm @ 60 psi]	.20 [rim space (in.)/20 gpm @ 60 psi]
Gravity tank type water closets	1.6 gallons/flush	1.28 gallons/flush <sup>1</sup>
Flushometer tank water closets	1.6 gallons/flush	1.28 gallons/flush <sup>1</sup>
Flushometer valve water closets	1.6 gallons/flush	1.28 gallons/flush <sup>1</sup>
Electromechanical hydraulic water closets	1.6 gallons/flush	1.28 gallons/flush <sup>1</sup>
Urinals	1.0 gallons/flush	.5 gallons/flush

1. Includes single and dual flush water closets with an effective flush of 1.28 gallons or less:

Single flush toilets—The effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is the average flush volume when tested in accordance with ASME A 112.19.233.2.

Dual flush toilets—The effective flush volume shall not exceed 1.28 gallons (4.8 liters). The effective flush volume is defined as the composite, average flush volume of two reduced flushes and one full flush. Flush volumes will be tested in accordance with ASME A 112.19.2 and ASME A 112.19.14.



**TABLE 5.303.6  
STANDARDS FOR PLUMBING  
FIXTURES AND FIXTURE FITTINGS**

REQUIRED STANDARDS	
Water closets (toilets) – flushometer valve type single flush, maximum flush volume	ASME A 112.19.2/ CSA B45.1 – 1.28 gal (4.8 L)
Water closets (toilets) – flushometer valve type dual flush, maximum flush volume	ASME A 112.19.14 and USEPA WaterSense Tank-Type High-Efficiency Toilet Specification – 1.28 gal (4.8 L)
Water closets (toilets) – tank-type	U.S. EPA WaterSense Tank-Type High-Efficiency Toilet Specification
Urinals, maximum flush volume	ASME A 112.19.2/ CSA B45.1 – 0.5 gal (1.9 L)
Urinals, nonwater urinals	ASME A 112.19.19 (vitreous china) ANSI Z124.9-2004 or IAPMO Z124.9 (plastic)
Public lavatory faucets: Maximum flow rate – 0.5 gpm (1.9 L/min)	ASME A 112.18.1/CSA B125.1
Public metering self-closing faucets: Maximum water use – 0.25 gal (1.0 L) per metering cycle	ASME A 112.18.1/CSA B125.1
Residential bathroom lavatory sink faucets: Maximum flow rate – 1.5 gpm (5.7 L/min) <sup>1</sup>	ASME A 112.18.1/CSA B125.1

## **SECTION 5.304 OUTDOOR WATER USE**

**5.304.1 Compliance with Local Water Efficient Landscape Ordinance.** Projects with landscape areas of 1,000 square feet or greater must comply with the City's Water Conservation in Landscaping Regulations, pursuant to Chapter 36, Article XII-A, Division A36.32 of the City Code. Projects with landscape areas of less than 1,000 square feet must comply with the requirements of Section 5.304.

**5.304.2 Water budget.** A water budget shall be developed for landscape irrigation use that conforms to the local water efficient landscape ordinance or to the California Department of Water Resources Model Water Efficient Landscape Ordinance where no local ordinance is applicable.

**Note:** Prescriptive measures to assist in compliance with the water budget are listed in Sections 492.5 through 492.8, 492.10 and 492.11 of the ordinance, which may be found at:  
<http://www.owue.water.ca.gov/landscape/ord/ord.cfm>.

**5.304.3 Outdoor potable water use.** For new water service for landscaped areas between 1,000 square feet and 5,000 square feet (the level at which *Water Code* §535 applies), separate meters or submeters shall be installed for indoor and outdoor potable water use.

**5.304.4 Irrigation design.** In new nonresidential construction with between 1,000 and 2,500 square feet of landscaped area (the level at which the MLO applies), install irrigation controllers and sensors which include the following criteria, and meet manufacturer's recommendations.

**5.304.4.1 Irrigation controllers.** Automatic irrigation system controllers installed at the time of final inspection shall comply with the following:

1. Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' needs as weather conditions change.
2. Weather- **and soil moisture**-based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s). Soil moisture-based controllers are not required to have rain sensor input.

**Note:** More information regarding irrigation controller function and specifications is available from the Irrigation Association.

**SECTION 5.305**  
**WATER REUSE SYSTEMS**  
**(Reserved)**

**MOUNTAIN VIEW GREEN BUILDING CODE – MATRIX ADOPTION TABLE**  
**CHAPTER 5 – NONRESIDENTIAL MANDATORY MEASURES**  
**DIVISION 5.4 – MATERIAL CONSERVATION AND RESOURCE EFFICIENCY**

Adopting agency	BSC	SFM	HCD			DSA		OSHDP				CSA	DPH	AGR	DWR	CEC	CA	SL	SLO
			1	2	1-AC	AC	SS	1	2	3	4								
Adopt entire CA chapter	X																		
Adopt entire chapter as amended (amended sections listed below)																			
Adopt only those sections that are listed below							X												
Chapter/Section																			
5.401.1							X												
5.402.1 Definitions							X												
5.402.1 ADJUST							X												
5.402.1 BALANCE							X												
5.402.1 TEST							X												
5.407							X												
5.408.1–5.408.3							X												
5.410.1							X												
5.410.1.1							X												

**CHAPTER 5**  
**NONRESIDENTIAL MANDATORY MEASURES**

*Division 5.4 – MATERIAL CONSERVATION AND RESOURCE EFFICIENCY*

**SECTION 5.401**  
**GENERAL**

**5.401.1 Scope.** The provisions of this chapter shall outline means of achieving material conservation and resource efficiency through protection of buildings from exterior moisture, construction waste diversion, employment of techniques to reduce pollution through recycling of materials, and building commissioning or testing and adjusting.

**SECTION 5.402**  
**Definitions**

**5.402.1 Definitions.** The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

**ADJUST.** To regulate fluid flow rate and air patterns at the terminal equipment, such as to reduce fan speed or adjust a damper.

**BALANCE.** To proportion flows within the distribution system, including submains, branches and terminals, according to design quantities.

**BUILDING COMMISSIONING.** A systematic quality assurance process that spans the entire design and construction process, including verifying and documenting that building systems and components are planned, designed, installed, tested, operated and maintained to meet the owner's project requirements.

**TEST.** A procedure to determine quantitative performance of a system or equipment.

**SECTION 5.403**  
**FOUNDATION SYSTEMS**

(Reserved)

**SECTION 5.404**  
**EFFICIENT FRAMING TECHNIQUES**  
(Reserved)

**SECTION 5.405**  
**MATERIAL SOURCES**  
(Reserved)

**SECTION 5.406**  
**ENHANCED DURABILITY AND REDUCED MAINTENANCE**  
(Reserved)

**SECTION 5.407**  
**WATER RESISTANCE AND MOISTURE MANAGEMENT**

**5.407.1 Weather protection.** Provide a weather-resistant exterior wall and foundation envelope as required by *California Building Code* Section 1403.2 (Weather Protection) and *California Energy Code* Section 150, (Mandatory Features and Devices), manufacturer's installation instructions or local ordinance, whichever is more stringent.

**5.407.2 Moisture control.** Employ moisture control measures by the following methods.

**5.407.2.1 Sprinklers.** Design and maintain landscape irrigation systems to prevent spray on structures.

**5.407.2.2 Entries and openings.** Design exterior entries and/or openings subject to foot traffic or wind-driven rain to prevent water intrusion into buildings.

**Notes:**

1. Use features such as overhangs and recesses, and flashings integrated with a drainage plane.
2. Use nonabsorbent floor and wall finishes within at least two feet around and perpendicular to such openings.

**SECTION 5.408**  
**CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING**

**5.408.1 Compliance with local construction & demolition debris diversion program.** Projects adding, constructing or renovating 5,000 square feet or more of floor area must comply with the City of Mountain View's Construction and Demolition Debris Division Program, pursuant to Chapter 16, Article III of the City Code. Projects adding or constructing 5,000 square feet or less of floor area, if subject to this code, must comply with the requirements of Section 5.408 of this code.

**5.408.1.1 Construction waste diversion.** Establish a construction waste management plan for the diverted materials, or meet local construction and demolition waste management ordinance, whichever is more stringent.

**5.408.2 Construction waste management plan.** Where a local jurisdiction does not have a construction and demolition waste management ordinance, submit a construction waste management plan for approval by the enforcement agency that:

1. Identifies the materials to be diverted from disposal by efficient usage, recycling, reuse on the project or salvage for future use or sale.
2. Determines if materials will be sorted on-site or mixed.
3. Identifies diversion facilities where material collected will be taken.

4. Specifies that the amount of materials diverted shall be calculated by weight or volume, but not by both.

**5.408.2.1 Documentation.** Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 5.408.2, Items 1 thru 4. The waste management plan shall be updated as necessary and shall be accessible during construction for examination by the enforcing agency.

**Exception:** [DSA-SS] Jobsites in areas where there is no mixed construction and demolition debris (C&D) processor or recycling facilities within a feasible haul distance shall meet the requirements as follows:

1. The enforcement agency having jurisdiction shall at its discretion, enforce the waste management plan and make exceptions as deemed necessary.

**5.408.2.2 Isolated jobsites.** The enforcing agency may make exceptions to the requirements of this section when jobsites are located in areas beyond the haul boundaries of the diversion facility.

**5.408.3 Construction waste reduction of at least 50 percent.** Recycle and/or salvage for reuse a minimum of 50 percent of the non-hazardous construction and demolition debris, or meet a local construction and demolition waste management ordinance, whichever is more stringent. Calculate the amount of materials diverted by weight or volume, but not by both.

**Exceptions:**

1. Excavated soil and land-clearing debris
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist.

**5.408.4 Excavated soil and land clearing debris.** 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed.

**SECTION 5.409  
LIFE CYCLE ASSESSMENT  
(Reserved)**

**SECTION 5.410  
BUILDING MAINTENANCE AND OPERATION**

**5.410.1 Recycling by occupants.** Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics and metals.

**5.410.1.1 Sample ordinance.** Space allocation for recycling areas shall comply with Chapter 18, Part 3, Division 30 of the *Public Resources Code*. Chapter 18 is known as the California Solid Waste Reuse and Recycling Access Act of 1991 (Act).

**5.410.2 Commissioning.** For new buildings 10,000 square feet and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements. Commissioning shall be performed in accordance with this section by trained personnel with experience on projects of comparable size and complexity. Commissioning requirements shall include:

1. Owner's or Owner representative's project requirements
2. Basis of design
3. Commissioning measures shown in the construction documents
4. Commissioning plan
5. Functional performance testing

6. Documentation and training
7. Commissioning report

All building systems and components covered by Title 24, Part 6, as well as process equipment and controls, and renewable energy systems shall be included in the scope of the Commissioning Requirements.

**5.410.2.1 Owner's or Owner representative's Project Requirements (OPR).** The expectations and requirements of the building appropriate to its phase shall be documented before the design phase of the project begins. This documentation shall include the following:

1. Environmental and sustainability goals
2. Energy efficiency goals
3. Indoor environmental quality requirements
4. Project program, including facility functions and hours of operation, and need for after hours operation
5. Equipment and systems expectations
6. Building occupant and operation and maintenance (O&M) personnel expectations

**5.410.2.2 Basis of Design (BOD).** A written explanation of how the design of the building systems meets the OPR shall be completed at the design phase of the building project, and updated as necessary during the design and construction phases. The Basis of Design document shall cover the following systems:

1. Heating, ventilation, air conditioning (HVAC) systems and controls
2. Indoor lighting system and controls
3. Water heating system
4. Renewable energy systems
5. Landscape irrigation systems
6. Water reuse systems

**5.410.2.3 Commissioning plan.** Prior to permit issuance a commissioning plan shall be completed to document how the project will be commissioned and shall be started during the design phase of the building project. The Commissioning Plan shall include the following:

1. General project information
2. Commissioning goals
3. Systems to be commissioned. Plans to test systems and components shall include:
  - a. An explanation of the original design intent
  - b. Equipment and systems to be tested, including the extent of tests
  - c. Functions to be tested
  - d. Conditions under which the test shall be performed
  - e. Measurable criteria for acceptable performance
4. Commissioning team information
5. Commissioning process activities, schedules and responsibilities. Plans for the completion of commissioning requirements listed in Sections 5.410.2.4 through 5.410.2.6 shall be included

**5.410.2.4 Functional performance testing.** Functional performance tests shall demonstrate the correct installation and operation of each component, system and system-to-system interface in accordance with the approved plans and specifications. Functional performance testing reports shall contain information addressing each of the building components tested, the testing methods utilized, and include any readings and adjustments made.

**5.410.2.5 Documentation and training.** A Systems Manual and Systems Operations Training are required, including Occupational Safety and Health Act (OSHA) requirements in *California Code of Regulations* (CCR), Title 8, Section 5142, and other related regulations.

**5.410.2.5.1 Systems manual.** Documentation of the operational aspects of the building shall be completed within the Systems Manual and delivered to the building owner or representative and facilities operator. The Systems Manual shall include the following:

1. Site information, including facility description, history and current requirements
2. Site contact information
3. Basic operations and maintenance, including general site operating procedures, basic troubleshooting, recommended maintenance requirements, site events log
4. Major systems
5. Site equipment inventory and maintenance notes
6. A copy of all special inspection verifications required by the enforcing agency or this code
7. Other resources and documentation

**5.410.2.5.2 Systems operations training.** The training of the appropriate maintenance staff for each equipment type and/or system shall be documented in the commissioning report and shall include the following:

1. System/equipment overview (what it is, what it does and with what other systems and/or equipment it interfaces)
2. Review and demonstration of servicing/preventive maintenance
3. Review of the information in the Systems Manual
4. Review of the record drawings on the system/equipment

**5.410.2.6 Commissioning report.** A complete report of commissioning process activities undertaken through the design, construction and reporting recommendations for postconstruction phases of the building project shall be completed and provided to the owner or representative.

**5.410.4 Testing and adjusting.** Testing and adjusting of systems shall be required for buildings less than 10,000 square feet.

**5.410.4.2 Systems.** Develop a written plan of procedures for testing and adjusting systems. Systems to be included for testing and adjusting shall include at a minimum, as applicable to the project:

1. HVAC systems and controls
2. Indoor and outdoor lighting and controls
3. Water heating systems
4. Renewable energy systems
5. Landscape irrigation systems
6. Water reuse systems

**5.410.4.3 Procedures.** Perform testing and adjusting procedures in accordance with industry best practices and applicable standards on each system as determined by the building official.

**5.410.4.3.1 HVAC balancing.** In addition to testing and adjusting, before a new space-conditioning system serving a building or space is operated for normal use, the system shall be balanced in accordance with the procedures defined by the Testing Adjusting and Balancing Bureau National Standards; the National Environmental Balancing Bureau Procedural Standards; or Associated Air Balance Council National Standards or as approved by the building official.

**5.410.4.4 Reporting.** After completion of testing, adjusting and balancing, provide a final report of testing signed by the individual responsible for performing these services.

**5.410.4.5 Operation and maintenance (O & M) manual.** Provide the building owner or representative with detailed operating and maintenance instructions and copies of guaranties/warranties for each system. O & M instructions shall be consistent with OSHA requirements in CCR, Title 8, Section 5142, and other related regulations.

**5.410.4.5.1 Inspections and reports.** Include a copy of all inspection verifications and reports required by the enforcing agency.



**MOUNTAIN VIEW GREEN BUILDING CODE – MATRIX ADOPTION TABLE**  
**CHAPTER 5 – NONRESIDENTIAL MANDATORY MEASURES**  
**DIVISION 5.5 – ENVIRONMENTAL QUALITY**

Adopting agency	BSC	SFM	HCD			DSA		OSHDPD				CSA	DPH	AGR	DWR	CEC	CA	SL	SLO
			1	2	1-AC	AC	SS	1	2	3	4								
Adopt entire CA chapter	X																		
Adopt entire chapter as amended (amended sections listed below)																			
Adopt only those sections that are listed below							X												
Chapter/Section																			
5.501.1							X												
5.502.1 Definitions							X												
5.504.3							X												
5.504.4							X												
5.504.4.1							X												
Table 5.504.4.1							X												
Table 5.504.4.2							X												
5.504.4.3							X												
5.504.4.3.1							X												
Table 5.504.4.3							X												
5.504.4.3.2							X												
5.504.4.4 and subsections							X												
5.504.4.5							X												
Table 5.504.4.5							X												
5.504.4.6							X												
5.504.4.6.1, Item 2							X												
5.504.5.3							X												
5.505							X												
5.506.1							X												
5.508.1							X												
5.508.1.1							X												

## CHAPTER 5 NONRESIDENTIAL MANDATORY MEASURES

### *Division 5.5 – ENVIRONMENTAL QUALITY*

#### **SECTION 5.501 GENERAL**

**5.501.1 Scope.** The provisions of this chapter shall outline means of reducing the quantity of air contaminants that are odorous, irritating, and/or harmful to the comfort and well-being of a building's installers, occupants and neighbors.

#### **SECTION 5.502 DEFINITIONS**

**5.502.1 Definitions.** The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

**COMPOSITE WOOD PRODUCTS.** Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated

timber, prefabricated wood I-joists or finger-jointed lumber.

**Note:** See CCR, Title 17, Section 93120.1.

**MERV.** Filter minimum efficiency reporting value, based on ASHRAE 52.2-1999.

**MAXIMUM INCREMENTAL REACTIVITY (MIR).** The maximum change in weight of ozone formed by adding a compound to the “Base Reactive Organic Gas (ROG) Mixture” per weight of compound added, expressed to hundredths of a gram (g O<sub>3</sub> /g ROC).

**Note:** MIR values for individual compounds and hydrocarbon solvents are specified in CCR, Title 17, Sections 94700 and 94701.

**PRODUCT-WEIGHTED MIR (PWMIR).** The sum of all weighted-MIR for all ingredients in a product subject to this article. The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging).

**Note:** PWMIR is calculated according to equations found in CCR, Title 17, Section 94521(a).

**REACTIVE ORGANIC COMPOUND (ROC).** Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere.

**VOC.** Volatile organic compound broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a).

**Note:** Where specific regulations are cited from different agencies such as SCAQMD, ARB, etc., the VOC definition included in that specific regulation is the one that prevails for the specific measure in question.

## **SECTION 5.503 FIREPLACES**

**5.503.1 General.** Install only a direct-vent sealed-combustion gas or sealed wood-burning fireplace, or a sealed woodstove or pellet stove, and refer to residential requirements in the *California Energy Code*, Title 24, Part 6, Subchapter 7, Section 150. Woodstoves, pellet stoves and fireplaces shall comply with applicable local ordinances. **Mountain View city code Chapter 8, Article I, Division IV shall be referenced for wood burning appliances.**

**5.503.1.1 Woodstoves.** Woodstoves and pellet stoves shall comply with U.S. EPA Phase II emission limits.

## **SECTION 5.504 POLLUTANT CONTROL**

**5.504.3 Covering of duct openings and protection of mechanical equipment during construction.** At the time of rough installation, or during storage on the construction site and until final startup of the heating and cooling equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of dust or debris which may collect in the system.

**5.504.4 Finish material pollutant control.** Finish materials shall comply with Sections 5.504.4.1 through 5.504.4.4.

**5.504.4.1 Adhesives, sealants and caulks.** Adhesives, sealants, and caulks used on the project shall meet the requirements of the following standards:

1. Adhesives, adhesive bonding primers adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable, or SCAQMD Rule 1168VOClimits, as shown in Tables 5.504.4.1 and 5.504.4.
2. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products as specified in subsection 2, below 2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than one pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of *California Code of Regulations*, Title 17, commencing with Section 94507.

**TABLE 5.504.4.1**  
**ADHESIVE VOC LIMIT<sup>1,2</sup>**  
**Less Water and Less Exempt Compounds in Grams Per Liter**

ARCHITECTURAL APPLICATIONS	CURRENT VOC LIMIT
Indoor carpet adhesives	50
Carpet pad adhesives	50
Outdoor carpet adhesives	150
Wood flooring adhesive	100
Rubber floor adhesives	60
Subfloor adhesives	50
Ceramic tile adhesives	65
VCT and asphalt tile adhesives	50
Drywall and panel adhesives	50
Cove base adhesives	50
Multipurpose construction adhesives	70
Structural glazing adhesives	100
Single-ply roof membrane adhesives	250
Other adhesive not specifically listed	50
<b>SPECIALTY APPLICATIONS</b>	
PVC welding	510
CPVC welding	490
ABS welding	325
Plastic cement welding	250
Adhesive primer for plastic	550
Contact adhesive	80
Special purpose contact adhesive	250
Structural wood member adhesive	140
Top and trim adhesive	250
<b>SUBSTRATE SPECIFIC APPLICATIONS</b>	
Metal to metal	30
Plastic foams	50
Porous material (except wood)	50
Wood	30
Fiberglass	80

1. If an adhesive is used to bond dissimilar substrates together the adhesive with the highest VOC content shall be allowed.
2. For additional information regarding methods to measure the VOC content specified in this table, see South Coast Air Quality Management District Rule 1168, <http://www.arb.ca.gov/DRDB/SC/CURHTML/R1168.PDF>.

**TABLE 5.504.4.2**  
**SEALANT VOC LIMIT**  
**Less Water and Less Exempt Compounds in Grams per Liter**

SEALANTS	CURRENT VOC LIMIT
Architectural	250
Marine deck	760
Nonmembrane roof	300
Roadway	250
Single-ply roof membrane	450
Other	420
SEALANT PRIMERS	
Architectural	
Nonporous	250
Porous	775
Modified bituminous	500
Marine deck	760
Other	750

Note: For additional information regarding methods to measure the VOC content specified in these tables, see South Coast Air Quality Management District Rule 1168.

**5.504.4.3 Paints and coatings.** Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Coatings Suggested Control Measure, as shown in Table 5.504.4.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 5.504.4.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in Subsections 4.21, 4.36 and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 5.504.4.3 shall apply.

**5.504.4.3.1 Aerosol paints and coatings.** Aerosol paints and coatings shall meet the PWMIR Limits for ROC in Section 94522(a)(3) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(c)(2) and (d)(2) of *California Code of Regulations*, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8 Rule 49.

**TABLE 5.504.4.3**  
**VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS<sup>2, 3</sup>**  
**Grams of VOC Per Liter of Coating,**  
**Less Water and Less Exempt Compounds**

COATING CATEGORY	EFFECTIVE 1/1/2010	EFFECTIVE 1/1/2012
Flat coatings	50	
Nonflat coatings	100	
Nonflat high gloss coatings	150	
<b>Specialty Coatings</b>		
Aluminum roof coatings	400	
Basement specialty coatings	400	
Bituminous roof coatings	50	
Bituminous roof primers	350	
Bond breakers	350	
Concrete curing compounds	350	
Concrete/masonry sealers	100	
Driveway sealers	50	
Dry fog coatings	150	
Faux finishing coatings	350	
Fire resistive coatings	350	
Floor coatings	100	
Form-release compounds	250	
Graphic arts coatings (sign paints)	500	
High-temperature coatings	420	
Industrial maintenance coatings	250	
Low solids coatings <sup>1</sup>	120	
Magnesite cement coatings	450	
Mastic texture coatings	100	
Metallic pigmented coatings	500	
Multicolor coatings	250	
Pretreatment wash primers	420	
Primers, sealers and undercoaters	100	
Reactive penetrating sealers	350	
Recycled coatings	250	
Roof coatings	50	
Rust preventative coatings	400	250
Shellacs:		
Clear	750	
Opaque	550	
Specialty primers, sealers and undercoaters	350	100
Stains	250	
Stone consolidants	450	
Swimming pool coatings	340	
Traffic marking coatings	100	
Tub and tile refinish coatings	420	
Waterproofing membranes	250	
Wood coatings	275	
Wood preservatives	350	
Zinc-rich primers	340	

1. Grams of VOC per liter of coating, including water and including exempt compounds.

2. The specified limits remain in effect unless revised limits are listed in subsequent columns in the table.

3. Values in this table are derived from those specified by the California Air Resources Board, Architectural Coatings Suggested Control Measure, February 1, 2008. More information is available from the Air Resources Board.

**5.504.4.3.2 Verification.** Verification of compliance with this section shall be provided at the request of the **City of Mountain View**. Documentation may include, but is not limited to, the following:

1. Manufacturer's product specification
2. Field verification of on-site product containers

**5.504.4.4 Carpet systems.** All carpet installed in the building interior shall meet the testing and product requirements of one of the following:

1. Carpet and Rug Institute's Green Label Plus Program.
2. California Department of Public Health Standard Practice for the testing of VOCs (Specification 01350).

3. NSF/ANSI 140 at the Gold level.
4. Scientific Certifications Systems Sustainable Choice.

**5.504.4.4.1 Carpet cushion.** All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute Green Label program.

**5.504.4.4.2 Carpet adhesive.** All carpet adhesive shall meet the requirements of Table 5.504.4.1.

**5.504.4.5 Composite wood products.** Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.), by or before the dates specified in those sections, as shown in Table 5.504.4.5.

**TABLE 5.504.4.5  
FORMALDEHYDE LIMITS<sup>1</sup>  
Maximum Formaldehyde Emissions in Parts per Million.**

PRODUCT	CURRENT LIMIT	JAN 1, 2012	JUL 1, 2012
Hardwood plywood veneer core	0.05		
Hardwood plywood composite core	0.08		0.05
Particle board	0.09		
Medium density fiberboard	0.11		
Thin medium density fiberboard <sup>2</sup>	0.21	0.13	

1. Values in this table are derived from those specified by the California Air Resources Board, Air Toxics Control Measure for Composite Wood as tested in accordance with ASTM E 1333-96 (2002). For additional information, see *California Code of Regulations*, Title 17, Sections 93120 through 93120.12.

2. Thin medium density fiberboard has a maximum thickness of eight millimeters.

**5.504.4.5.1 Early compliance.** Reserved.

**5.504.4.5.2 Documentation.** Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:

1. Product certifications and specifications
2. Chain of custody certifications
3. Other methods acceptable to the enforcing agency

**5.504.4.6 Resilient flooring systems.** For 50 percent of floor area receiving resilient flooring, install resilient flooring complying with the VOC-emission limits defined in the 2009 Collaborative for High Performance Schools (CHPS) criteria and listed on its Low-emitting Materials List (or Product Registry) or certified under the Resilient Floor Covering Institute (RFCI) FloorScore program. [DSA-SS] Documentation shall be provided that verifies that finish materials are certified to meet the pollutant emission limits.

**5.504.4.6.1 Verification of compliance.** Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.

**Notes:**

1. CHPS Low-emitting Materials List may be found at [www.chpregistry.com/live](http://www.chpregistry.com/live) or <http://www.chps.net/dev/Drupal/node/381>.
2. [DSA-SS] Products certified under the FloorScore program may be found at: [http://www.rfci.com/int\\_FS-ProdCert.htm](http://www.rfci.com/int_FS-ProdCert.htm).
3. Products certified under the Greenguard Children & Schools program and compliant with CHPS criteria may be found at: <http://www.greenguard.org/Default.aspx?tabid=135>.

**5.504.5.3 Filters.** In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air prior to occupancy that provides at least a Minimum Efficiency Reporting Value (MERV) of 8.

**5.504.7 Environmental tobacco smoke (ETS) control.** Where outdoor areas are provided for smoking, prohibit smoking within 25 feet of building entries, outdoor air intakes and operable windows and in buildings; or as enforced by ordinances, regulations or policies of any city, county, city and county, California Community College, campus of the California State University, or campus of the University of California, whichever are more stringent. When ordinances, regulations or policies are not in place, post signage to inform building occupants of the prohibitions.

## **SECTION 5.505 INDOOR MOISTURE CONTROL**

**5.505.1 Indoor moisture control.** Buildings shall meet or exceed the provisions of *California Building Code*, CCR, Title 24, Part 2, Sections 1203 (Ventilation) and Chapter 14 (Exterior Walls). For additional measures not applicable to low-rise residential occupancies, see Section 5.407.2 of this code.

## **SECTION 5.506 INDOOR AIR QUALITY**

**5.506.1 Outside air delivery.** For mechanically or naturally ventilated spaces in buildings, meet the minimum requirements of Section 121 (Requirements For Ventilation) of the *California Energy Code*, CCR, Title 24, Part 6, or the applicable local code, whichever is more stringent, and Chapter 4 of CCR, Title 8.

**5.506.2 Carbon dioxide (CO<sub>2</sub>) monitoring.** For buildings equipped with demand control ventilation, CO<sub>2</sub> sensors and ventilation controls shall be specified and installed in accordance with the requirements of the current edition of the *California Energy Code*, CCR, Title 24, Part 6, Section 121(c).

## **SECTION 5.507 ENVIRONMENTAL COMFORT**

**5.507.4 Acoustical control.** Employ building assemblies and components with Sound Transmission Coefficient (STC) values determined in accordance with ASTM E 90 and ASTM E 413.

**5.507.4.1 Exterior noise transmission.** Wall and roof-ceiling assemblies making up the building envelope shall have an STC of at least 50, and exterior windows shall have a minimum STC of 30 for any of the following building locations:

1. Within 1,000 ft (300 m) of right of ways of freeways.
2. Within 5 mi. (8 km) of airports serving more than 10,000 commercial jets per year.
3. Where sound levels at the property line regularly exceed 65 decibels, other than occasional sound due to church bells, train horns, emergency vehicles and public warning systems.

**Exception:** Buildings with few or no occupants and where occupants are not likely to be affected by exterior noise, as determined by the enforcement authority, such as factories, stadiums, storage, enclosed parking structures and utility buildings.

**5.507.4.2 Interior sound.** Wall and floor-ceiling assemblies separating tenant spaces and tenant spaces and public places shall have an STC of at least 40.

**Note:** Examples of assemblies and their various STC ratings may be found in the catalog of STC and ICC Ratings for Wall and Floor/Ceiling Assemblies.

## **SECTION 5.508 OUTDOOR AIR QUALITY**

**5.508.1 Ozone depletion and greenhouse gas reductions.** Installations of HVAC, refrigeration and fire suppression equipment shall comply with Sections 5.508.1.1 and 5.508.1.2.

**5.508.1.1 Chlorofluorocarbons (CFCs).** Install HVAC, refrigeration and fire suppression equipment that do not contain CFCs.

**5.508.1.2 Halons.** Install HVAC, refrigeration and fire suppression equipment that do not contain Halons.